



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of Environmental Quality

Amanda Smith
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

Water Quality Board
Paula Doughty, *Chair*
Steven P. Simpson, *Vice Chair*
Neal L. Peacock
Clyde L. Bunker
Jeffery L. Tucker
Merritt K. Frey
Darrell H. Mensel
Leland J. Myers
Amanda Smith
Gregory L. Rowley
Daniel C. Snarr
Myron E. Bateman
Walter L. Baker
Executive Secretary

Utah Water Quality Board Meeting

DEQ Building Board Room #1015

195 North 1950 West

Salt Lake City, Utah 84116

October 26, 2011

Work Meeting 8:00-10:00

Update on Nutrient Studies Part II: Ecological and Economic Benefits – Jeff Ostermiller, Mike Shupryt
and Nicholas von Stackelberg

Board Meeting Begins @ 10:00 a.m.

AGENDA

- A. **Water Quality Board Meeting – Roll Call**
- B. (Tab 1) **Minutes:**
 - 1. Approval of Minutes for September 28, 2011 Paula Doughty, Chair
- C. Recognition Award to Dave Echols for his service on the WQ Board..... Paula Doughty
- D. **Executive Secretary's Report** Walt Baker
- E. (Tab 2) **Funding Requests:**
 - 1. Financial Status Report Emily Cantón
 - 2. Murray City Funding Request..... Beth Wondimu
 - 3. Big Water Town Funding Request..... Beth Wondimu
 - 4. Perry-Willard WTP Request for Construction Grant..... Beth Wondimu
 - 5. Long Valley Request for Additional Planning Advance..... Beth Wondimu
- F. (Tab 3) **Rulemaking:**
 - 1. Adopt the Emigration Creek TMDL Rule, R317-1-7..... Carl Adams
 - 2. Adopt the Operator Certification Changes Rule R317-10 Judy Etherington
 - 3. Adopt the Pesticide Rule, R317-8-9 John Kennington
 - 4. Board member invitation for Public Hearing Officer for Monday, December 5, 2011,
6:00-7:00 PM of Proposed Changes to Water Quality Standards..... Chris Bittner



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Executive Secretary

Work Meeting held prior to Board Meeting: Jeff Ostermiller, Nicholas von Stackelberg and Mike Shupyrst gave the Water Quality Board an update on the Nutrient Benefits Studies. Discussion on Nutrient Studies will continue at the next WQ Board work meeting.

MINUTES

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY

UTAH WATER QUALITY BOARD

DEQ Building Board Room #1015

195 North 1950 West

Salt Lake City, Utah 84116

Wednesday, September 28, 2011

UTAH WATER QUALITY BOARD MEMBERS PRESENT

Merritt Frey	Clyde Bunker	Myron Bateman
Leland Myers	Jeffery Tucker	Darrell Mensel
Greg Rowley	Paula Doughty	
Steven Simpson	Neal Peacock	

Absent: Amanda Smith and Daniel Snarr

DIVISION OF WATER QUALITY STAFF MEMBERS PRESENT

Walt Baker, Faye Bell, John Whitehead, Ed Macauley, Leah Ann Lamb, Beth Wondimu, John Cook, Carl Adams, Sandy Wingert, Jeff Ostermiller, Hilary Arens, Mark Novak, Chris Bittner

OTHERS PRESENT

<u>Name</u>	<u>Organization Representing</u>
Jim Olson	HDR Engineering
Ron Winterton	Duchesne County MBA
Craig Ashley	Private Citizen
Byron Colton	Horrocks Engineering
Jade McBride	Mayor of Big Water
Marc Edminster	Lewis Young, Inc.
Ed Shaw	Boss Engineering & Surveying Co
Ken Spiers	Bowen Collins & Assoc
John Bjerregaard	Wasatch Civil Engineering
Steve Woerner	Elwood Town
Doug Hill	Murray City
Colleen Monk	Elwood Town
Gena Richens	Elwood Town
Keeran Nelson	Elwood Town
Dustin Matsumori	George K. Baum & Co.

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Byran Dixon
Paul Inkenbrandt

Davis County Health Dept
Granger-Hunter Imp Dist
Granger-Hunter Imp Dist
Aqua Engineering
Utah Geological Survey
Utah Geological Survey
Elwood Town Mayor
Murray City
Water Resources
HDR
Sunrise Engineering
Cirrus Ecological
Cirrus Ecological
UGS (DNR)

Chair Doughty called the Board meeting to order at 9:40 a.m. and invited the members of the audience to introduce themselves.

APPROVAL OF MINUTES OF THE AUGUST 29, 2011 MEETING

Corrections on page 2 in the paragraph referring to Senator Dayton, it should read “her” not “his” and “She is exploring” not “He is exploring”. Ms. Frey requested the motion should reflect a deadline be incorporated into the TMDL to revisit the TMDL in 8 years. on page 5 under “petition the board to formally adopt Emigration Creek TMDL.”

Motion: **It was moved by Mr. Simpson and seconded by Mr. Bateman to approve the minutes of the August 29, 2011 meeting with the recommended changes. The motion was unanimously approved.**

Executive Secretary’s Report: Mr. Baker told the Board a proposed settlement has been reached with Chevron, resulting in

1 million going to Salt Lake City,
3.5 million being paid to the State of which \$3 million will be dedicated to environmental projects in the vicinity.

Senator Dayton is still working on a bill which may change how DEQ boards are constituted and function to make them work and serve the public better.

Introduction of new staff members: Mr. Ostermiller introduced Mike Shupryt and Emilie Flemer as new members of the Water Quality Management Section.

FUNDING REQUEST

Financial Assistance Status Report –Mr. Macauley updated the Board on the “Summary of Assistance Program Funds,” as outlined on page 2.1.

Murray City Introduction: Ms. Wondimu introduced Doug Hill and Danny Astill with Murray City, and Dustin Matsumori with George K. Baum & Co. Murray City is requesting financial assistance in the amount of a \$2,626,000 loan at an interest rate of 2.5% repayable over 20 years for upgrading its existing wastewater collection system. Murray City is proposing to construct approximately 2,000 linear feet of 15-inch bypass sewer lines from 100 East, 5770 South to 235 East, 5600 South, upsizing 5,600 linear feet

from 10-inch to 12-inch at Edison Avenue from State Street to Main Street, and State Street from 6100 South to 5770 South. The project will include manholes and other appurtenances needed to install the replacement lines. Staff comments and recommendation will be provided at an upcoming Board meeting.

Granger-Hunter Request for Authorization: Mr. Cook introduced Wayne Watts and Brad Paxman with Granger-Hunter Improvement District, and Dustin Matsumori with George K. Baum & Co. Granger-Hunter Improvement District is requesting financial assistance in the amount of a \$6,202,000 loan with a repayment term of 20 years at 2.5% for the construction of its 2011 Old Main Pump Station and Collection System Improvements Project. Staff recommends that the Water Quality Board authorize a loan in the amount of \$6,202,000 to Granger-Hunter Improvement District for this project.

Motion: **It was moved by Mr. Myers to authorize a loan to the Granger-Hunter Improvement District in the amount of \$6,202,000 at 2.5% interest repayment term of 20 years. The motion was seconded by Mayor Peacock and was unanimously approved.**

Duchesne County Request for Planning Advance: Ms. Wondimu introduced Ron Winterton, County Commissioner, Craig Ashley from Duchesne County, and Byron Colton with Horrocks Engineering. Duchesne County is requesting a Planning Advance in the amount of \$22,000 to prepare a Wastewater Facilities Plan for Hancock Cove. Hancock Cove lies in unincorporated Duchesne County and consists almost exclusively of residential development. All existing residences are currently on onsite wastewater treatment systems and Tri-county Health Department has been notified of a number of septic system failures in this area. Following a discussion, the Board suggested converting the Planning Advance from a loan to a grant, thus removing the special conditions.

Motion: **It was moved by Mr. Simpson to adhere Duchesne County a grant of \$22,000 to conduct a planning study to evaluate all possible alternatives to eliminate septic system failures and minimize the potential for groundwater pollution and public health risks. The motion was seconded by Mr. Bateman and was unanimously approved.**

Big Water Town Introduction: Ms. Wondimu introduced Mayor Jade McBride from Big Water Town and Ed Shaw from BOSS Engineering. Big Water City is requesting financial assistance in the amount of a \$2,025,000 grant and a \$1,058,000 loan at an interest rate of 0.0% repayable over 30 years for construction of a wastewater collection and treatment system. In 2006 Big Water City conducted a preliminary sewer facility master plan study in order to consider the construction of a citywide sewer system. Wastewater from the existing onsite wastewater systems had potentially seeped into the Wahweap Creek, which could result in an impact on the quality of the Wahweap Creek water that flows into Lake Powell and the Colorado River System. Mr. Simpson asked Big Water to first contact the Community Impact Board for funding before coming back to request funding from the Water Quality Board. Mr. Myers requested when they do come back that they have a referendum or something showing public support for the project along with a list of what kind of failures and other problems they have encountered. Staff was also directed to sample the seeps to determine if it is effluent from the on-site systems.

Elwood Town Request for Additional Funding: Mr. Cook introduced Elwood Mayor Randy Hansen and John Bjerregaard with Wasatch Civil Engineering. On February 25, 2009 the Water Quality Board authorized a construction grant of \$550,000 and a loan of \$1,560,000 to Elwood to design and construct a \$7,110,000 wastewater collection and treatment system. On September 7, 2011, Elwood Town opened bids, and estimated that the total project cost had now risen to \$8,572,000. Elwood Town is now requesting a grant in the amount of \$2,132,000 to proceed to construction of its sewer system.

Motion: It was moved by Mayor Peacock to authorize a grant in the amount of \$2,132,000 to Elwood Town with the recommended conditions. The motion was seconded by Mr. Bateman and was unanimously approved.

Request to Proceed with Rulemaking: Water Quality Standards Triennial Review: Mr. Bittner gave a brief overview of the mark-up of the present rule R317-2, showing the proposed rule changes, with deletions in strikeout font and proposed additions in underlined font. Staff requested Board approval to proceed with rulemaking for the proposed changes shown as Attachment 1. Any comments and responses will be presented to the Board, along with any subsequent recommended revisions to the proposed rule language, at future Board meetings.

Motion: It was moved by Mr. Myers to proceed to Rulemaking with the proposed changes to R317-2. The motion was seconded by Ms. Frey and was unanimously approved.

OTHER BUSINESS:

Request for Approval of Principal Basin-Fill Aquifer Classification in the East Shore Area of Davis County: Mr. Novak explained on June 22, 2011 WQ Board meeting, the Board authorized Division staff to conduct a public hearing for the subject aquifer classification, which was petitioned by the Davis County Health Department. The 30-day public comment period began on July 20, 2011 and ended on August 22, 2011. Two comments were received and based on the comments received by Mr. Myers, the petition was revised to clarify what the classification does and does not apply to. Staff recommended that the Board approve the classification as designated in the revised petition.

Motion: It was moved by Mr. Myers to approve the classification as designated in the revised petition. The motion was seconded by Mr. Bunker and was unanimously approved.

Update to the Board on the Jordan TMDL: Carl Adams and Hilary Arens briefed the Board on the status of the Jordan River TMDL, specifically on the comments received from the study's Technical Advisory Committee and plans for the outreach effort to educate the public and municipalities on the upcoming public draft of the study.

**-NEXT MEETING -
To be determined**

Paula Doughty, Chairperson
Utah Water Quality Board

Hardship Grant Funds Financial Projections

	2nd Qtr FY 2012	3rd Qtr FY 2012	4th Qtr FY 2012	1st Qtr FY 2013	2nd Qtr FY 2013	3rd Qtr FY 2013	4th Qtr FY 2013
FEDERAL HARDSHIP GRANT FUND (FHGF)	Oct - Dec 2011	Jan - Mar 2012	Apr - June 2012	July - Sept 2012	Oct - Dec 2012	Jan - Mar 2013	Apr - June 2013
Funds Available							
Beginning Balance	\$ 13,967,402	\$ 1,535,383	\$ 2,034,737	\$ (30,138)	\$ (525,887)	\$ (439,757)	\$ 1,186
Interest Earnings at 0.6%	\$ 21,545	\$ 2,368	\$ 3,139	\$ -	\$ -	\$ -	\$ 2
Hardship Grant Assessments	\$ 104,555	\$ 496,986	\$ 898,986	\$ 504,251	\$ 86,130	\$ 440,943	\$ 855,831
Hardship Advance Repayments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Funds Available	\$ 14,093,502	\$ 2,034,737	\$ 2,936,863	\$ 474,113	\$ (439,757)	\$ 1,186	\$ 857,018
Project Obligations							
Blanding City - Planning Adv.	\$ (39,900)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Coalville - Planning Adv.	\$ (25,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Coalville - Construction Grant	\$ -	\$ -	\$ (2,967,001)	\$ -	\$ -	\$ -	\$ -
Duchesne County - Hancock Cove	\$ (22,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Elwood Town - Construction Grant	\$ (1,513,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Green River - Planning Adv.	\$ (23,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Manti - Planning Adv.	\$ (20,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Mona City - Construction Grant	\$ (1,400,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Willard City - Construction Grant	\$ (101,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Willard/Perry - 4 Year Operating Grant/Set-Aside	\$ (2,246,500)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Projects in Planning							
*Big Water (cost share CIB) - Construction Grant	\$ (1,166,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
*Long Valley - Planning Advance	\$ (27,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
*Willard/Perry - Construction Grant	\$ (373,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-Point Source Obligations							
DEQ - Economic Study of Nutrient Removal	\$ (313,586)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
EQ - Nutrient Reduction Benefit Study	\$ (75,115)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
DEQ - Willard Spur Study	\$ (1,287,774)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Division of Wildlife Resources - Sevier River	\$ (26,349)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Jordan Valley WCD	\$ (150,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Twelve Mile Canyon	\$ (727,400)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UACD	\$ (100,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UDAF	\$ (1,000,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Utah Farm Bureau	\$ (100,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2009 - Remaining Payments	\$ (135,813)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2010 - Remaining Payments	\$ (204,708)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2011 - Remaining Payments	\$ (493,579)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2012 - Remaining Payments	\$ (987,393)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2013 Allocation	\$ -	\$ -	\$ -	\$ (1,000,000)	\$ -	\$ -	\$ -
Non-Point Source Projects in Planning							
None at this time	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Obligations	\$ (12,558,118)	\$ -	\$ (2,967,001)	\$ (1,000,000)	\$ -	\$ -	\$ -
FHGF Unobligated Funds	\$ 1,535,383	\$ 2,034,737	\$ (30,138)	\$ (525,887)	\$ (439,757)	\$ 1,186	\$ 857,018

STATE HARDSHIP GRANT FUND (SHGF)

Funds Available							
Beginning Balance	\$ 459,544	\$ 470,502	\$ 668,769	\$ 930,232	\$ 1,014,266	\$ 1,025,828	\$ 1,200,148
Interest Earnings at 0.6%	\$ 709	\$ 726	\$ 1,032	\$ 1,435	\$ 1,565	\$ 1,582	\$ 1,851
UWLP Interest Earnings at 0.6%	\$ 6,818	\$ 7,770	\$ 6,829	\$ 4,646	\$ 6,153	\$ 7,433	\$ 9,850
Interest Payments	\$ 3,430	\$ 189,772	\$ 253,602	\$ 77,952	\$ 3,845	\$ 165,304	\$ 238,134
Hardship Advance Repayments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Funds Available	\$ 470,502	\$ 668,769	\$ 930,232	\$ 1,014,266	\$ 1,025,828	\$ 1,200,148	\$ 1,449,984
Project Obligations							
None at this time	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Obligations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SHGF Unobligated Balance	\$ 470,502	\$ 668,769	\$ 930,232	\$ 1,014,266	\$ 1,025,828	\$ 1,200,148	\$ 1,449,984
3F/SHGF Unobligated Funds	\$ 2,005,885	\$ 2,703,507	\$ 900,093	\$ 488,378	\$ 586,071	\$ 1,201,334	\$ 2,307,002

2.1

*Projects being presented to the WQB

Date Printed: 10/17/2011

WQB
10/17/2011

**Loan Funds
Financial Projections**

	2nd Qtr FY 2012	3rd Qtr FY 2012	4th Qtr FY 2012	1st Qtr FY 2013	2nd Qtr FY 2013	3rd Qtr FY 2013	4th Qtr FY 2013
STATE REVOLVING LOAN FUND (SRF)	Oct - Dec 2011	Jan - Mar 2012	Apr - June 2012	July - Sept 2012	Oct - Dec 2012	Jan - Mar 2013	Apr - June 2013
Funds Available							
SRF - 1st Round (LOC)	\$ 4,590,937	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
State Match	\$ 28,991	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
ARRA (Stimulus) Funds	\$ 254,004	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SRF - 2nd Round	\$ 26,994,002	\$ 6,774,262	\$ 8,987,970	\$ 11,282,486	\$ 13,741,557	\$ 15,914,826	\$ 21,771,230
Interest Earnings at 0.6%	\$ 41,638	\$ 10,449	\$ 13,864	\$ 17,403	\$ 21,196	\$ 24,549	\$ 33,582
Loan Repayments	\$ 1,543,693	\$ 4,829,259	\$ 3,930,653	\$ 2,441,668	\$ 2,152,073	\$ 5,831,855	\$ 2,795,981
Total Funds Available	\$ 33,453,265	\$ 11,613,970	\$ 12,932,486	\$ 13,741,557	\$ 15,914,826	\$ 21,771,230	\$ 24,600,793
Project Obligations							
"Green Projects"	\$ (254,004)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Kearns Improvement District	\$ (825,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Mona City (cost share USACE)	\$ (3,063,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Orem City	\$ (981,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
South Valley WRF - NonPoint Source	\$ (805,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Loan Authorizations							
Coalville (cost share USDA)	\$ -	\$ -	\$ (1,650,000)	\$ -	\$ -	\$ -	\$ -
Granger-Hunter Improvement District	\$ (6,202,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Kearns Improvement District	\$ (7,615,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
*Murray City	\$ -	\$ (2,626,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Santaquin City	\$ (6,934,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Snyderville Basin (Optional)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (22,110,000)
Projects in Planning							
Long Valley Town	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Obligations	\$ (26,679,004)	\$ (2,626,000)	\$ (1,650,000)	\$ -	\$ -	\$ -	\$ (22,110,000)
SRF Unobligated Funds	\$ 6,774,262	\$ 8,987,970	\$ 11,282,486	\$ 13,741,557	\$ 15,914,826	\$ 21,771,230	\$ 2,490,793

UTAH WASTEWATER LOAN FUND (UWLF)

Funds Available							
UWLF	\$ 4,420,334	\$ 5,037,360	\$ 4,427,280	\$ 3,012,297	\$ 3,989,122	\$ 4,819,047	\$ 6,386,052
Sales Tax Revenue	\$ 741,967	\$ 741,967	\$ 741,967	\$ 896,875	\$ 896,875	\$ 896,875	\$ 896,875
Loan Repayments	\$ 231,000	\$ 1,265,902	\$ 731,000	\$ 406,900	\$ 260,000	\$ 997,080	\$ 757,000
Total Funds Available	\$ 5,393,301	\$ 7,045,230	\$ 5,900,247	\$ 4,316,072	\$ 5,145,997	\$ 6,713,002	\$ 8,039,927
General Obligations							
State Match Transfer	\$ (28,991)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
DWQ Administrative Expenses (TMDL, etc.)	\$ (326,950)	\$ (326,950)	\$ (326,950)	\$ (326,950)	\$ (326,950)	\$ (326,950)	\$ (326,950)
Project Obligations							
None at this time	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Loan Authorizations							
Ephraim City	\$ -	\$ (2,091,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Projects in Planning							
Green River	\$ -	\$ (200,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Manti	\$ -	\$ -	\$ (2,561,000)	\$ -	\$ -	\$ -	\$ -
Total Obligations	\$ (355,941)	\$ (2,617,950)	\$ (2,887,950)	\$ (326,950)	\$ (326,950)	\$ (326,950)	\$ (326,950)
UWLF Unobligated Funds	\$ 5,037,360	\$ 4,427,280	\$ 3,012,297	\$ 3,989,122	\$ 4,819,047	\$ 6,386,052	\$ 7,712,977

2.2

*Projects being presented to the WQB

Date Printed: 10/17/2011

in file BTH

WKS

Application Number:

Date Received: August 8, 2011

Date to be presented to the WQB: October 26, 2011

BW
OK
UC

**WATER QUALITY BOARD
FEASIBILITY REPORT FOR WASTEWATER TREATMENT PROJECT
AUTHORIZATION**

APPLICANT:	Big Water Municipal Corporation P.O. Box 410127 Big Water, Utah 84741 Telephone: (435) 675-3760
PRESIDING OFFICIAL:	Mayor Jade McBride P.O. Box 410127 Big Water, Utah 84741 Telephone: (435) 675-3760
CONTACT PERSON:	Mayor Jade McBride P.O. Box 410127 Big Water, Utah 84741 Telephone: (435) 675-3760
TREASURER:	Genia Joseph, Town Clerk P.O. Box 410127 Big Water, Utah 84741 Telephone: (435) 675-3760
CONSULTING ENGINEER:	BOSS Engineering & Surveying, LLC 220 North, 1300 West, Ste #4 Pleasant Grove, Utah 84062 Telephone: (801) 763-8467
BOND COUNSEL:	Eric Johnson, Esq Blaisdell & Church, P.C. 5995 South, Redwood Road Salt Lake, Utah 84123 Telephone: (801) 261-3407

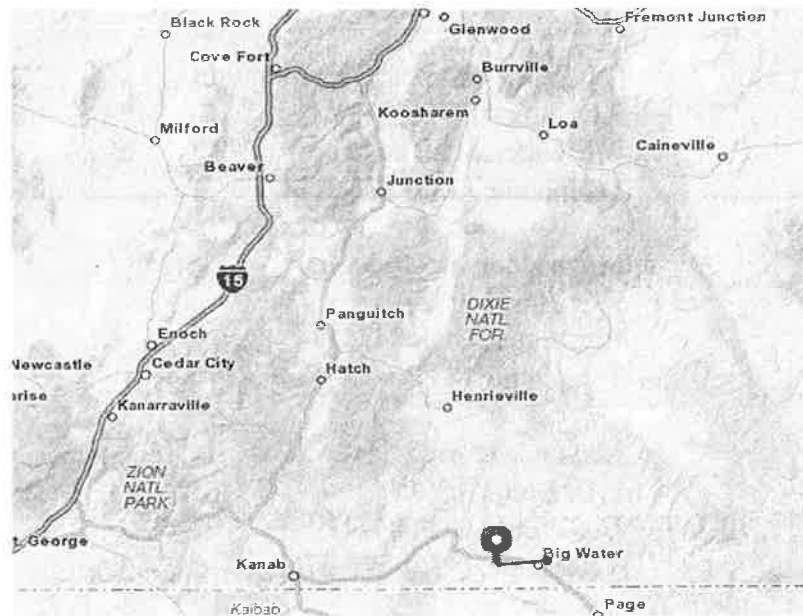
APPLICANT'S REQUEST:

Big Water City is requesting financial assistance in the amount of a \$1,166,000 grant for construction of a wastewater collection and treatment system.

APPLICANT'S LOCATION:

Big Water City is located in Kane County.

MAP OF APPLICANT'S LOCATION



UPDATES SINCE PROJECT INTRODUCTIONS ON SEPTEMBER 28, 2011

A feasibility report as an introduction to the Utah Water Quality Board (WQB) was presented on September 28, 2011. During that time, the WQB proposed to seek additional funding from Permanent Community Impact Board (CIB) to the 50% cost sharing between the Water Quality Board and the CIB that was presented. DWQ staff has contacted the CIB staff to discuss the proposal. Due to its sufficient funds at this time, CIB has agreed to increase its funding to 100% of the loan and 70% of the grant funding.

PROJECT NEED:

Currently, wastewater treatment in Big Water is provided by onsite wastewater treatment systems (septic systems) with possibly a few very old cesspools. Homes that are located in the northern (and older part) of the city have among the smallest lot sizes in the State (a minimum of 0.2 acres) and are unlikely to have a replacement area should system failure occur.

According to the preliminary engineering report dated April 2009, the surrounding existing on-site wastewater treatment systems located in the city are considered to have an impact on the nearby water bodies. In the report, it is noted that the wastewater from the existing on-site wastewater systems had seeped into the Wahweap Creek located just few miles away from the city. These seepages had been considered to have an impact on the quality of the Wahweap Creek that flows into the Lake Powell and the Colorado River System.

In 2006 Big Water City conducted a preliminary sewer facility master plan study in order to consider the construction of a citywide sewer collection and treatment system. Based on the preliminary facility plan, the community has come to realize that a citywide master planned sewer system is needed to foster current and future needs in an orderly manner and preserve the environment by appropriately treating its wastewater.

Currently, the city is proposing to construct a city wide wastewater collection system and an aerated treatment lagoon to address these issues.

PROJECT DESCRIPTION:

Big Water City is proposing to construct approximately 60,800 linear feet of 8-inch sewer lines, 2,333 linear feet of 4-inch force main and a pump station for wastewater collection and a new total containment lagoon system for treatment (alternatives number 2 & 4).

ALTERNATIVES EVALUATED:

The Facilities Plan evaluated the following alternatives:

1. No action.
2. Construction of conventional gravity sewer system.
3. Construction of pressure system.
4. Construction of a total containment lagoon system.
5. Construction of facultative lagoons with land application.
6. Construction of a rapid infiltration basin.
7. Construction of an oxidation ditch mechanical treatment system

POSITION ON PROJECT PRIORITY LIST:

Big Water is ranked No. 18 out of 26 projects on the FY 2011 Wastewater Treatment Project Priority List.

POPULATION GROWTH:

The average population growth through the year 2031 is estimated to be 2.5% in the Facilities Plan.

	<u>Year</u>	<u>Total</u>
Current ERU:	2011	270
Design ERU:	2031	421

PUBLIC PARTICIPATION AND DEMONSTRATION OF PUBLIC SUPPORT:

Big Water City has conducted a public meeting on July 2011 as required by the Utah Wastewater State Revolving Fund (SRF) program. The City will hold a final public hearing on October 27, 2011 upon securing funding from the Water Quality Board.

IMPLEMENTATION SCHEDULE:

Public Meeting	July 2011
Apply to WQB for Funding:	August 2011
WQB Funding Authorization:	October 2011
Public Hearing:	October 27, 2011
Advertise EA (FONSI):	October 30, 2011
Engineering Report Approval:	November 2011
Commence Design:	September 2011
Issue Construction Permit:	November 2011
Advertise for Bids:	November 2011
Bid Opening:	November 2011
Loan Closing:	October 2011
Commence Construction:	December 2011
Complete Construction:	June 2012

APPLICANT'S CURRENT USER CHARGE:

Big Water City does not currently have a public sewer system.

COST ESTIMATE:

Engineering - Planning	\$0
Engineering - Design	\$316,385
Engineering - CMS	\$316,385
Engineering - Other	\$70,000
Construction	\$4,847,500
Contingency (30%)	\$590,100
Land acquisition	\$60,000
Legal/Bonding	\$9,000
Total Amount:	\$6,209,370

COST SHARING:

Big Water will request matching funding from CIB. This cost sharing is proposed for the project:

<u>Funding Source</u>	<u>Cost Sharing</u>	<u>Percent of Project</u>
WQB Grant	\$1,166,000	19%
CIB Grant	\$2,924,000	47%
CIB Loan	\$2,119,370	34%
Total Amount:	\$6,209,370	100%

Residents would be responsible to pay out-of-pocket to abandon existing septic systems and run new sewer laterals around the back of their houses to the new city sewer system. SITLA has offered to loan Big Water \$465,000 at 2.5% interest to capitalize a fund for the construction of individual

laterals. This is anticipated to cost from \$500 to \$2,500 per residence, depending on lot characteristics, and could be paid for over time by residents using the proposed SITLA loan.

ESTIMATED ANNUAL COST FOR SEWER SERVICE:

Operation & Maintenance - Annual	\$16,200
CIB Debt Service (0.0%; 30 yrs)	\$70,646
CIB Required Reserves (1½ pmt/10 yr)	\$10,597
Existing Sewer Debt Service	\$0
Total Annual Cost	\$97,443
Monthly Cost / ERU	\$30.07
Cost calculated as % of MAGI (\$25,476)	1.4%

STAFF COMMENTS:

The Division of Water Quality is supportive of Big Water City's proposed project. This project is being driven by Big Water City's realization that onsite wastewater treatment is a temporary solution to its current and future wastewater treatment and disposal needs. Onsite wastewater treatment is not compatible with continued growth and increased population in the community and it could present a source of potential groundwater contamination problems.

STAFF RECOMMENDATIONS:

Staff recommends that the Water Quality Board authorize Big Water city a grant in the amount of \$1,166,000.

SPECIAL CONDITIONS:

1. Big Water City must agree to participate annually in the Municipal Wastewater Planning Program (MWPP).
2. Big Water City must secure the balance of the funding from the CIB, and must close the CIB loan before this grant will be available for the project.
3. Funding is contingent on SITLA contributing the property for the lagoon site, either through granting the property to the City, or providing the property in return for impact fee credits.

Big Water City - Revised Cost Analysis

Project Costs	
Engineering - Design	316,385
Engineering - CMS	316,385
Engineering (other)	70,000
Land/Easements/water right	60,000
Administration	0
Legal/Bonding	9,000
Construction	4,847,500
Contingency	590,100
Total Project Cost:	6,209,370

Project Funding	
funding (other sources)	0
CIB/DWQ funding	6,209,370

ESTIMATED COST OF SEWER SERVICE

CIB/DWQ Grant	CIB Loan Amount	CIB Loan Interest Rate	CIB Loan Debt Service	CIB Loan Reserve	Annual Sewer Existing O&M Cost	Debt Service	Total Annual Sewer Cost as a % of MAGI
0	6,209,370	0.00%	206,979	31,047	16,200	0	254,226 78.46 3.65%
3,104,685	3,104,685	0.00%	103,490	15,523	16,200	0	135,213 41.73 1.94%
3,415,154	2,794,217	0.00%	93,141	13,971	16,200	0	123,312 38.06 1.77%
3,787,716	2,421,654	0.00%	80,722	12,108	16,200	0	109,030 33.65 1.57%
4,090,000	2,119,370	0.00%	70,646	10,597	16,200	0	97,443 30.07 1.40%
4,719,121	1,490,249	0.00%	49,675	7,451	16,200	0	73,326 22.63 1.05%
5,277,965	931,406	0.00%	31,047	4,657	16,200	0	51,904 16.02 0.75%
6,209,370	0	0.00%	0	0	16,200	0	16,200 5.00 0.23%

Current Customer Base & User Charges	
Residential Customers (ERU):	270
Comm/Indust Customers (ERU)	0
Total Customers (ERU):	270
MAGI for Big Water (2009)	\$25,784
Connect Fee (ERU):	\$0
Current Monthly User Fee (per	\$0.00

Annual Sewer O&M Cost	
Annual O&M Expense:	\$16,200

Funding Conditions	
Loan Repayment Term:	30 years
Reserve Funding Period:	10 years

Date Received: August 2011
Date to be presented to the WQB: October 26, 2011

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**WATER QUALITY BOARD
FEASIBILITY REPORT FOR WASTEWATER TREATMENT PROJECT
AUTHORIZATION**

APPLICANT: Murray City
5025 South, State Street
Murray, Utah 84107
Telephone: (801) 270-2440

PRESIDING OFFICIAL: Dan Snarr, Mayor

TREASURER/RECORDER: Jennifer Kennedy, Recorder

CONSULTING ENGINEER: Greg Poole, P.E.
Hansen, Allen & Luce
6771 South, 900 East
Midvale, Utah 84047
Telephone: (801) 566-5599

BOND COUNSEL Randy Larsen, Partner
Ballard Spahr LLP
201 South Main Street
Salt Lake City, Utah 84111
Telephone: (801) 531-3079

FINANCIAL ADVISOR Dustin Matsumori
George K. Baum & Company
15 West, South Temple, Suite 1090
Salt Lake City, Utah 84101
Telephone: (801) 538-0351

APPLICANT'S REQUEST:

Murray City is requesting financial assistance in the amount of a \$2,626,000 loan at an interest rate of 2.5% repayable over 20 years for upgrading its existing wastewater collection system.

APPLICANT'S LOCATION:

Murray City is located in Salt Lake County.

MAP OF APPLICANT'S LOCATION:



PROJECT HISTORY:

The City currently provides sewer collection service to 11,701 connections. Sewage is conveyed to the Central Valley Water Reclamation Facility (CVWRF) for treatment. Some of the existing sewer lines have provided Murray City with nearly 100 years of service. Some portions of the lines have reached design capacity and some are not easily accessible for maintainance.

PROJECT NEED:

Because some of the pipelines are reaching design capacities, and a portion of the lines have inadequate capacity, the city needs to replace the aged sewer lines and upsize the inadequate lines to meet its current and future demand.

PROJECT DESCRIPTION:

Murray City is proposing to construct approximately 2,000 linear feet of 15-inch bypass sewer lines from 100 East 5770 South to 235 East 5600 South, upsizing 5,600 linear feet from 10-inch to 12-inch at Edison Avenue from State Street to Main Street, and State Street from 6100 South to 5770 South. The project will also include manholes and other appurtenances needed to install the replacement lines.

ALTERNATIVES EVALUATED:

The consulting engineers evaluated the following collection system alternatives:

1. No action.
2. Replacement in the same alignment as the existing sewer.
3. Replacement in new alignment (Bypass sewer).
4. Re-routing flows.
5. Construction of a new interceptor or bypass sewer.
6. Pipe bursting trenchless installation.

POSITION ON PROJECT PRIORITY LIST:

Murray City is ranked No. 19 out of 26 projects on the FY 2011 Wastewater Treatment Project Priority List.

POPULATION GROWTH:

The average population growth through the year 2031 is estimated to be 0.5%.

	<u>Year</u>	<u>Total</u>
Current ERU :	2011	11,701
Design ERU:	2031	12,928

PUBLIC PARTICIPATION AND DEMONSTRATION OF PUBLIC SUPPORT:

Murray City has conducted one public meeting as required by the Utah Wastewater State Revolving Fund (SRF) program. The City will hold a final public hearing in November 2011.

IMPLEMENTATION SCHEDULE:

Apply to WQB for Funding:	August 2011
Public Meeting	October 2009
WQB Funding Authorization:	October 2011
Public Hearing	November 2011
Advertise EA (FONSI):	November 2011
Engineering Report Approval:	November 2011
Commence Design:	March 2011
Issue Construction Permit:	December 2011
Advertise for Bids:	January 2012
Bid Opening:	February 2012
Loan Closing:	March 2012
Commence Construction:	April 2012
Complete Construction:	June 2012

APPLICANT'S CURRENT USER CHARGE:

The City's sewer user fees are allocated as follows:

Sewer User Fee per ERU/Month for Collection System	\$6.71 base rate & \$1.99 flow charge per 100 cu ft
Sewer User Fee per ERU/Month for Treatment in CVWRF	<u>\$20.76</u>
Total Monthly Sewer User Charges Per ERU	\$27.47

COST ESTIMATE:

Engineering (Design & CMS)	\$338,000
Construction	\$2,412,300
Contingency	\$87,700
Legal/Bonding	\$100,000
DWQ Loan Origination Fee	<u>\$26,000</u>
Total Amount:	\$2,964,000

COST SHARING:

Murray City will contribute a total of \$338,000 towards the engineering planning, design and construction management of the collection system upgrade.

The cost sharing proposed for the project is shown below.

<u>Funding Source</u>	<u>Cost Sharing</u>	<u>Percent of Project</u>
Local Contribution	\$338,000	12%
WQB Loan to Murray City	\$2,626,000	88%
Total Amount:	\$2,964,000	100%

ESTIMATED ANNUAL COST FOR SEWER SERVICE FOR MURRAY CITY:

Operation & Maintenance Annual	\$825,000
WQB Debt Service (2.5%; 20yrs)	\$168,450
WQB Required Reserves (1½ pmt/6 yr)	\$42,113
Existing Sewer Debt Service	\$886,000
Total Annual Cost	\$1,921,563
Monthly Cost / ERU	\$34.45
Cost as % of Calculated MAGI (\$36,480)	1.13%

STAFF COMMENTS:

This project will assist the city to replace the aged pipelines and lines that have insufficient capacity to meet current and future needs. Because of this concern, the city desires to repair portions of its wastewater collection system to bring them back into compliance with State standards.

STAFF RECOMMENDATION:

Staff recommends that the Water Quality Board authorize Murray City a construction loan in the amount of \$2,626,000 at an interest rate of 2.5% repayable over 20 years for upgrading its existing wastewater collection system.

SPECIAL CONDITIONS:

1. Murray City must agree to participate annually in the Municipal Wastewater Planning Program (MWPP).
2. Murray City must maintain an up to date water conservation plan.

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File: Murray City, Admin, Section I

Murray City - Wastewater Collection System Improvements

Current Customer Base & User Charges	
Residential Customers (ERU):	11,701
Comm/Ind. Customers (ERU):	0
Total Customers (ERU):	11,701
MAGI for Murray City (2009)	\$36,480
Connect Fee (ERU):	\$0
Sewer User Fee/ERU/Mo	\$27.47

Annual Sewer O&M Cost	
Annual O&M Expense:	\$825,000

Funding Conditions	
Loan Repayment Term:	20 years
Reserve Funding Period:	6 years

Project Costs	
Engineering - Design	0
Engineering - CMS	0
Engineering (other)	0
Land/Easements/water right	0
Administration	0
Legal/Bonding	100,000
DWQ origination fee	26,000
Construction	2,412,300
Contingency	425,700
Total Project Cost:	2,964,000

Project Funding	
funding (other sources)	338,000
WQB	2,626,000

ESTIMATED COST OF SEWER SERVICE

Grant Amount	Loan Amount	Loan Interest Rate	Loan Debt Service	Loan Reserve	Annual Sewer O&M Cost	Existing Sewer Debt Service	Total Annual Sewer Cost	Collection + Treatment	
								Sewer Fee Cost/ERU/Mo	Sewer Cost as % of MAGI
0	2,626,000	0.00%	131,300	32,825	825,000	886,000	1,875,125	34.02	1.12%
0	2,626,000	1.50%	152,953	38,238	825,000	886,000	1,902,192	34.22	1.13%
0	2,626,000	2.00%	160,598	40,149	825,000	886,000	1,911,747	34.29	1.13%
0	2,626,000	2.50%	168,450	42,113	825,000	886,000	1,921,563	34.36	1.13%
0	2,626,000	3.85%	190,668	47,667	825,000	886,000	1,949,335	34.55	1.14%
1,969,500	656,500	2.00%	40,149	10,037	825,000	886,000	1,761,187	33.21	1.09%
2,232,100	393,900	0.00%	19,695	4,924	825,000	886,000	1,735,619	33.03	1.09%
2,626,000	0	0.00%	0	0	825,000	886,000	1,711,000	32.86	1.08%

Date Received: September 28, 2011
Date to be presented to the WQB: October 26, 2011

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**WATER QUALITY BOARD
FEASIBILITY REPORT FOR WASTEWATER TREATMENT PROJECT
AUTHORIZATION**

APPLICANT: Perry/Willard Wastewater Treatment Facility
Board
3005 South 1200 West
Perry City, Utah 84302
Ph: (434) 723-6461

PRESIDING OFFICIAL: Steven George Pettingill, Board President

CONTACT PERSON: Jeff Hollingsworth, Plant Manager

TREASURER: Susan Obray, Recorder

CONSULTING ENGINEER: Tyson Knudsen, P.E.
Sunrise Engineering
26 South Main Street
Smithfield, Utah
Ph: 435-563-3734

CITY ATTORNEY: n/a

BOND COUNSEL: Eric Todd Johnson
Blaisdell and Church
5995 South Redwood Road
Taylorsville, Utah 84123
Ph: 801-261-3503

APPLICANT'S REQUEST:

Perry/Willard Waste Water Treatment Facility (WWTP) Board is requesting financial assistance in the amount of a \$373,000 grant to construct effluent discharge outfall piping to a new discharge point in the boat raceway.

APPLICANT'S LOCATION:

Perry/Willard WWTP is located in Box Elder County.

MAP OF APPLICANT'S LOCATION:



PROJECT NEED:

Perry/Willard WWTP board manages the new IFAS wastewater treatment constructed in 2011 with a capacity of 2.0 million gallons per day (MGD) which services the communities of Perry City (1,500 residential and non residential connections) and Willard City (675 residential and non residential connections).

Currently, the effluent discharge system of the WWTP is located west of the treatment facility. Discharge is from the UV disinfection system into an existing drainage ditch thence to the Great Salt Lake transitional wetlands thence to the Willard Spur of the Great Salt Lake. This existing discharge system has created issues with private property owners and could result in future litigation.

To address this issue, the WWTP board is proposing to relocate the effluent outfall piping to the southwest side of the WWTP. The new outfall will consist of 30 inch HPDE pipeline. The pipeline will be installed from the west corner of the WWTP to the raceway boat ramp located in the Willard Spur.

PROJECT DESCRIPTION:

The WWTP board is proposing the following construction:

- Installation of 2,500 linear feet of 30-HDPE pipeline
- Installation of splitting diversion box and concrete box

IMPLEMENTATION SCHEDULE:

Apply to WQB for Funding:	September 28, 2011
WQB Funding Authorization:	October 26, 2011
Commence Design:	October 2011
Issue Construction Permit:	December 2011
Advertise for Bids:	January 2012
Bid Opening:	January 2012
Commence Construction:	February 2012
Complete Construction:	April 2012

COST SHARING:

The following cost sharing is proposed for this project is:

<u>Funding Source</u>	<u>Cost Sharing</u>	<u>Percent of Project</u>
WQB Grant	\$373,000	100%

APPLICANT'S CURRENT USER CHARGE:

Currently, Willard City charges \$42.31 per ERU per month and Perry City charges \$38 per ERU per month.

COST ESTIMATE:

Engineering – Design	\$10,000
Engineering - Design & Construction Survey	\$5,000
Engineering – CMS	\$16,800
Bidding Service	\$2,700
Construction	\$261,400
Contingency	\$53,000
Permitting & Administration	\$4,200

Wetland & Cultural Resource Investigation	\$4,800
Property and right of way Procurement	<u>\$15,000</u>
Total Amount:	\$372,900

STAFF COMMENTS AND RECOMMENDATION:

This project will allow the WWTP board to relocate the existing effluent discharge outfall system that is causing issues to private property owners, and relocate the outfall to a location that is desired by all parties.

Staff recommends that the Water Quality Board authorize Perry/Willard Wastewater Treatment Facility Board a grant in the amount of \$373,000 to perform the engineering and construction of the new outfall line.

SPECIAL CONDITIONS:

1. Perry/Willard WWTP board must obtain all of the easements/right-of-ways needed to relocate the outfall pipeline.
2. Perry/Willard WWTP board must comply with all applicable UPDES requirements including obtaining a UPDES permit for the new outfall prior to commencement of construction.
3. Perry/Willard WWTP board must comply with all applicable Army Corps of Engineers requirements including obtaining a permit.

Date Received: September 2011
Date to be presented to the WQB: October 26, 2011

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**WATER QUALITY BOARD
PLANNING ADVANCE FOR EXTENDED SEWER MASTER PLAN STUDY
AUTHORIZATION**

APPLICANT:	Long Valley Sewer Improvement District P.O. Box 220 Glendale, Utah 84729 Telephone: (435) 648-2341
PRESIDING OFFICIAL:	Roger Chamberlain, President
CONTACT PERSON:	Kingsley D. Nelson, Secretary/Treasurer
TREASURER:	Kingsley D. Nelson, Secretary/Treasurer
CONSULTING ENGINEER:	Jones & DeMille Engineering, Inc. 1535 South, 100 West. Telephone: (435) 896-8266
CITY ATTORNEY:	N/A
BOND COUNSEL:	Chamberlain & Associates 255 North, 100 East Richfield, Utah 84701 Telephone: (435) 896-4461

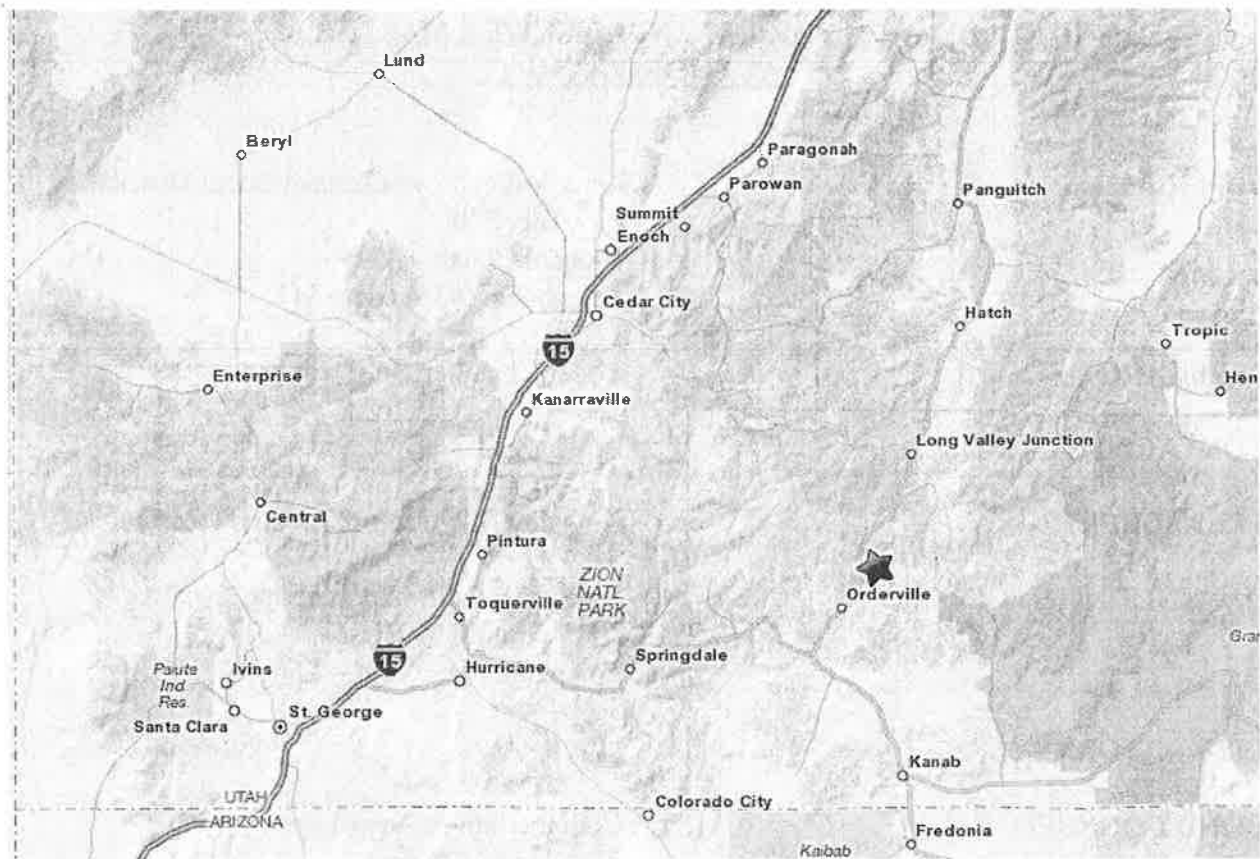
APPLICANT'S REQUEST:

Long Valley Sewer Improvement District (Long Valley) is requesting an additional Planning Advance in the amount of \$27,000 to expand its ongoing sewer facility plan study to include an infiltration and inflow (I&I) study.

APPLICANT'S LOCATION:

Long Valley is located in Kane County.

MAP OF APPLICANT'S LOCATION:



PROJECT NEED:

Long Valley currently provides wastewater collection & treatment services to the communities of Glendale, Orderville and Mt. Carmel.

The existing wastewater lagoon treatment system is nearing capacity. Currently, the wastewater collection system consists of sewer lines, an interceptor line, and a pump station that need upgrading to meet current and future demands.

On March 31, 2010 the Water Quality Board authorized a Planning Advance in the amount of \$25,000 to Long Valley to prepare a Wastewater Facility Plan. The estimated total cost for preparing the facility plan was \$55,000. The Permanent Community Impact Board (CIB) has also authorized a grant in addition to this planning advance to prepare the plan.

When the project was initially authorized, the city was not aware of occurrence of infiltration and inflow (I&I) in the wastewater collection system. A recently installed flow meter shows that a large amount of I&I is occurring in the system. The district is proposing to include an I&I study to identify areas where ground water and surface water are entering the existing system. This study is proposed to be included in the planning study (Facility Plan) that is currently being prepared by Long Valley to evaluate improvements needed to its existing collection and treatment system.

PROJECT DESCRIPTION:

The I&I study and apparatus needed to perform the study include:

1. Cost for mobile flow meter rental and data collection.
2. Cost for a sewer line video and cleaning.
3. Develop manhole inventory and survey.
4. Develop infiltration and inflow final report.

IMPLEMENTATION SCHEDULE:

It is estimated that the Planning Study will be completed approximately June 2012.

COST SHARING:

The estimated total cost for preparing the I&I study is \$60,000. Long Valley is requesting a Permanent Community Impact Board (CIB) grant in the amount of \$27,000 in addition to this planning advance. This request will be presented during the CIB's board meeting that will be held in November 2011.

The following cost sharing is proposed for the I&I study:

<u>Funding Source</u>	<u>Cost Sharing</u>	<u>Percent of Project</u>
CIB Grant	\$27,000	10%
Local Contribution	\$6,000	45%
WQB Planning Advance	\$27,000	45%
Total:	\$60,000	100%

STAFF COMMENTS AND RECOMMENDATION:

Staff recommends the Board authorize Long Valley an additional \$27,000 to supplement the March 31, 2010 Planning Advance in the amount of \$25,000. Long Valley is already preparing a sewer facility plan and needs to perform the I&I study to finalize this plan. The extended planning document would serve as a comprehensive wastewater collection and treatment system planning and coordination tool for the district.

Staff recommends that the Water Quality Board authorize an additional Planning Advance in the amount of \$27,000 to the Long Valley Sewer Improvement District to perform the I&I study needed to complete the Wastewater Facility Plan.

SPECIAL CONDITIONS:

1. This Planning Advance must be expeditiously repaid at the completion of the study whether or not a project is implemented as a result of this study.

2. The Division of Water Quality must approve the engineering agreement and plan of study before the Planning Advance will be executed.

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File: Long Valley: Administration: Section 1



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

MEMORANDUM

TO: Water Quality Board Members

THROUGH: Walter L. Baker, Director
John Whitehead, Assistant Director

FROM: Carl Adams, Watershed Protection Section Manager

DATE: October 17, 2011

SUBJECT: Request to adopt approved TMDLs by reference into Rule (R317-1-7)

The Water Quality Board has previously authorized initiation of rulemaking to adopt the TMDL for Upper Emigration Creek. The proposed rule was published in the Utah State Bulletin September 1, 2011 and the comment period closed October 17, 2011. No comments have been received to date. Pending no significant adverse comments are received, Staff is recommending that we incorporate by reference the revised Upper Emigration Creek TMDL into Rule (R317-1-7).

Attached is an executive summary of the TMDL proposed for adoption and a proposed version of R317-1 that includes the new TMDL.

3.1

Executive Summary

This document addresses water quality impairments within the Upper Emigration Creek Sub-Basin through the establishment of a Total Maximum Daily Load (TMDL) for *Escherichia coli* (*E. coli*). The purpose of this TMDL study is to assess watershed conditions, establish water quality endpoints, and propose effective strategies to restore the Creek's designated beneficial uses. Upper Emigration Creek, from the Salt Lake County flow gage at Rotary Park to its headwaters, was listed on Utah's 2002 Section 303(d) list of impaired waters for pathogens (Fecal Coliform). In 2006, Utah switched to *Escherichia coli* (*E. coli*) as the indicator species for pathogens as it provides a better indicator of human health threat.

The impaired beneficial use is infrequent contact recreational use such as wading and fishing (Class 2B). Data analyses show that *E. coli* concentrations and loading increase from upstream to downstream and during low flow conditions in mid to late summer.

Thus the critical season of this *E. coli* TMDL is defined by the months of July, August and September and need an *E. coli* load reduction of 56% collectively. The observed loading is higher during the summer months due to a combination of several factors including warmer water temperatures and increased activity of humans, domestic animals and wildlife. There are no UDWQ permitted point sources of pollution in the Upper Emigration Creek watershed, thus all necessary load reductions are allocated to nonpoint sources of pollution.

Previous studies suggest that the origin of nonpoint pollution in Emigration Creek may include residential waste disposal, fecal contamination from dogs and wildlife, stormwater runoff, hydrologic modifications, and groundwater seepage from old holding vaults and septic tank leach fields. Although many improvements have been implemented in the Upper Sub-Basin, exceedances of water quality standards still occur on a regular basis.

This TMDL suggests several implementation strategies. A septic system dye study is recommended to determine if effluent from leaking septic systems is contributing to the bacterial contamination in Emigration Creek, and if so, which septic systems are failing. Residents of Emigration Canyon are encouraged to participate in the EPA's Voluntary National Guidelines for Management of Onsite and Clustered Wastewater Treatment Systems. Finally, in order to better understand the degree to which various sources contribute to the *E. coli* load in Emigration Creek the contribution of human versus non-human bacterial contributions in Emigration Creek should be determined.

The Upper Emigration Creek Stakeholders have agreed that since many studies are not only underway but planned to further identify sources of *E. coli* contamination, this TMDL will be re-evaluated in 8 years to include the findings of these studies.



**Utah Department of Environmental Quality
Division of Water Quality
Water Quality Protection Section**

DRAFT

Upper Emigration Creek TMDL

Waterbody ID	UT16020204-012
Location	Salt Lake County
Pollutants of Concern	<i>Escherichia coli</i> (<i>E. coli</i>)
Impaired Beneficial Uses	Class 2B: Infrequent Contact
Current Loading	2.18E12 #/day
Loading Capacity (TMDL)	9.61E11 #/day
Load Reduction	1.22E12 #/day (56%)
Wasteload Allocation	0 #/day
Load Allocation	8.65E11 #/day
Margin of Safety	9.61E10 #/day
Defined Targets/Endpoints	1) Total maximum load as an daily average of less than 9.61E11 #/day 2) Load reduction of 1.22E12 #/day 3) Maximum water quality target of 668 MPN/100 ml and geometric mean 206 MPN/100ml
Implementation Strategy	Stakeholders will employ an iterative and adaptive approach to address all anthropogenic sources of <i>E. coli</i> loading to include failing onsite septic systems, animal waste, and stormwater runoff and will re-evaluate TMDL in 8 years.
This document is identified as a DRAFT TMDL for waters in the Emigration Creek drainage and is submitted under §303d of the Clean Water Act to U.S. EPA for review and approval.	

R317-1-7. TMDLs.

The following TMDLs are approved by the Board and hereby incorporated by reference into these rules:

- 7.1 Middle Bear River -- February 23, 2010
- 7.2 Chalk Creek -- December 23, 1997
- 7.3 Otter Creek -- December 23, 1997
- 7.4 Little Bear River -- May 23, 2000
- 7.5 Mantua Reservoir -- May 23, 2000
- 7.6 East Canyon Creek -- September 14, 2010
- 7.7 East Canyon Reservoir -- September 14, 2010
- 7.8 Kents Lake -- September 1, 2000
- 7.9 LaBaron Reservoir -- September 1, 2000
- 7.10 Minersville Reservoir -- September 1, 2000
- 7.11 Puffer Lake -- September 1, 2000
- 7.12 Scofield Reservoir -- September 1, 2000
- 7.13 Onion Creek (near Moab) -- July 25, 2002
- 7.14 Cottonwood Wash -- September 9, 2002
- 7.15 Deer Creek Reservoir -- September 9, 2002
- 7.16 Hyrum Reservoir -- September 9, 2002
- 7.17 Little Cottonwood Creek -- September 9, 2002
- 7.18 Lower Bear River -- September 9, 2002
- 7.19 Malad River -- September 9, 2002
- 7.20 Mill Creek (near Moab) -- September 9, 2002
- 7.21 Spring Creek -- September 9, 2002
- 7.22 Forsyth Reservoir -- September 27, 2002
- 7.23 Johnson Valley Reservoir -- September 27, 2002
- 7.24 Lower Fremont River -- September 27, 2002

- 7.25 Mill Meadow Reservoir -- September 27, 2002
- 7.26 UM Creek -- September 27, 2002
- 7.27 Upper Fremont River -- September 27, 2002
- 7.28 Deep Creek -- October 9, 2002
- 7.29 Uinta River -- October 9, 2002
- 7.30 Pineview Reservoir -- December 9, 2002
- 7.31 Browne Lake -- February 19, 2003
- 7.32 San Pitch River -- November 18, 2003
- 7.33 Newton Creek -- June 24, 2004
- 7.34 Panguitch Lake -- June 24, 2004
- 7.35 West Colorado -- August 4, 2004
- 7.36 Silver Creek -- August 4, 2004
- 7.37 Upper Sevier River -- August 4, 2004
- 7.38 Lower and Middle Sevier River -- August 17, 2004
- 7.39 Lower Colorado River -- September 20, 2004
- 7.40 Upper Bear River -- August 4, 2006
- 7.41 Echo Creek -- August 4, 2006
- 7.42 Soldier Creek -- August 4, 2006
- 7.43 East Fork Sevier River -- August 4, 2006
- 7.44 Koosharem Reservoir -- August 4, 2006
- 7.45 Lower Box Creek Reservoir -- August 4, 2006
- 7.46 Otter Creek Reservoir -- August 4, 2006
- 7.47 Thistle Creek -- July 9, 2007
- 7.48 Strawberry Reservoir -- July 9, 2007
- 7.49 Matt Warner Reservoir -- July 9, 2007
- 7.50 Calder Reservoir -- July 9, 2007
- 7.51 Lower Duchesne River -- July 9, 2007

7.52 Lake Fork River -- July 9, 2007

7.53 Brough Reservoir -- August 22, 2008

7.54 Steinaker Reservoir -- August 22, 2008

7.55 Red Fleet Reservoir -- August 22, 2008

7.56 Newcastle Reservoir -- August 22, 2008

7.57 Cutler Reservoir -- February 23, 2010

7.58 Pariette Draw -- September 28, 2010

7.59 Emigration Creek -- October 26, 2011



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith,
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

MEMORANDUM

TO: Utah Water Quality Board

THROUGH: Walter L. Baker, P.E., Director
Division of Water Quality

FROM: Judy Etherington
Wastewater Operator Certification Program Coordinator

DATE: October 13, 2011

SUBJECT: Request to Adopt the Proposed Changes to R317-10, Utah Administrative Code, "Certification of Wastewater Works Operators"

It is requested that the Utah Water Quality Board adopt the proposed changes to Utah Administrative Code R317-10, "Administrative Rules for Certification of Wastewater Works Operators" concerning the allowed reinstatement period for expired certifications. The public comment period is open until October 17, 2011. As of the date of this memo, no comments have been received.

The proposed changes increase the time to "one year after certificate expiration" for those operators who had shown their intention to keep their certifications active by obtaining the required CEUs during the term of the certificate. Retesting will still be required after the one year grace period has ended. It also allows the Council the leeway to use its discretion in unusual circumstances which may be brought before it in the future.

Attachments: Summary of Proposed Revisions to R317-10
Revisions to R317-10, Utah Administrative Code, "Administrative Rules For Certification of Wastewater Works Operators"

3.7

SUMMARY OF PROPOSED REVISIONS TO R317-10

The following changes are made to R317-10-11.D:

- Reinstatement of an expired certificate is allowed up to “one year” after expiration rather than “three months.”
- Addition of language which states, “When unusual circumstances exist, an operator may petition the Council to request additional time to meet the requirements. Each petition will be considered on its own merits.”

PROPOSED CHANGES TO TEXT OF R317-10-11.D

D. An expired certificate may be reinstated within [~~three months~~one year] after expiration by payment of a reinstatement fee. After [~~three months~~one year], an expired certificate cannot be reinstated, and the operator must retest to become certified. The required CEUs for renewal must be accrued before expiration of the certificate. When unusual circumstances exist, an operator may petition the Council to request additional time to meet the requirements. Each petition will be considered on its own merits.

R317. Environmental Quality, Water Quality.

R317-10. Certification of Wastewater Works Operators.

R317-10-1. Objectives.

The certification program is established in order to assist in protecting the quality of waters in the state of Utah by helping ensure that personnel in charge of wastewater works are trained, experienced, reliable and efficient; to protect the public health and the environment and provide for the health and safety of wastewater works operators; and to establish standards and methods whereby wastewater works operating personnel can demonstrate competency.

R317-10-2. Scope.

These certification rules apply to all wastewater treatment works and sewerage systems, with the exception of Onsite Wastewater Systems and Large Underground Wastewater Disposal Systems as defined in R317-1-1. This includes both wastewater collection systems and wastewater treatment systems except underground wastewater disposal systems. Wastewater works operated by political subdivisions must employ certified operators as required in this rule. Operators of wastewater systems not requiring certified operators (such as industrial wastewater treatment systems) may be certified according to provisions of these rules for testing and certification.

R317-10-3. Authority.

The Certification Program for Wastewater Works Operators is authorized by Section 19-5-104 of the Utah Code Annotated.

R317-10-4. Definitions.

A. "Board" means the Water Quality Board.

B. "Category" means type of certification (collection or wastewater treatment).

C. "Certificate" means a certificate issued by the Council, stating that the recipient has met the minimum requirements for the specified operator grade described in this rule.

D. "Certified Operator" means a person with the appropriate education and experience, as specified in this rule, who has successfully completed the certification exam or otherwise meets the requirements of this rule.

E. "Chief Operator" means the supervisor in direct responsible charge of all shift operators for a collection or treatment system.

F. "Collection System" means the system designed to collect and transport sewage from the beginning points that the collection entity regards as their responsibility to maintain and operate, to the points where the treatment facility assumes responsibility for operation and maintenance.

G. "Council" means the Utah Wastewater Operator Certification Council.

H. "Continuing Education Unit (CEU)" means ten contact hours of participation in and successful completion of an organized and approved continuing education experience. College credit in approved courses may be substituted for CEUs on an equivalency basis as defined in this rule.

I. "Direct Responsible Charge (DRC)" means active on-site charge and performance of operation duties. The person in direct responsible charge is generally a supervisor over wastewater treatment or collection who independently makes decisions affecting all treatment or system processes during normal operation which may affect the quality, safety, and adequacy of treatment of wastewater discharged from the plant. In cases where only one operator is employed, this operator shall be considered to be in direct responsible charge.

J. "Executive Secretary" means the Executive Secretary of the Water Quality Board.

K. "Grade Level" means any one of the possible steps within a certification category of either wastewater collection or wastewater treatment. There are four levels each for collection and treatment system operators, Grade I being the lowest and Grade IV the highest level. There is one level for lagoon operators.

L. "Grandfather Certificate" means a certificate issued to an operator, without taking an examination, by virtue of the operator meeting experience and other requirements in R317-10-11.G of this rule.

M. "Operating Experience" means experience gained in operating a wastewater treatment plant or collection system which enables the operator to make correct supervisory, operational, safety, and maintenance decisions affecting personnel, water quality, public health, regulatory compliance, and wastewater works operation, efficiency, and longevity.

N. "Operator" means any person who is directly involved in or may be responsible for operation of any wastewater works or facilities treating wastewater.

O. "Population Equivalent (P.E.)" means the population which would contribute an equivalent waste load based on the calculation of total pounds of B.O.D. contributed divided by 0.2. This calculation may be used where a significant amount of industrial waste is discharged to a wastewater system.

P. "Restricted Certificate" means a certificate issued upon passing the certification examination when other requirements have not been met.

Q. "Small Lagoon System" means a wastewater lagoon system serving fewer than 3500 population equivalent.

R. "Wastewater Works" means facilities for collecting, pumping, treating or disposing of sanitary wastewater.

R317-10-5. Wastewater Works Owner Responsibilities.

A. The chief operator and supervisors who make process decisions for the system and are designated to be in direct responsible charge must be certified at no less than the level of the facility classification. All other operators in direct responsible charge must be certified at no less than one grade lower than the facility classification or at the lowest required facility classification except as provided in B below. All facilities must have an operator certified at the facility level on duty or on call. If a facility or system undergoes a re-rating, all operators considered to be in DRC must be certified at the appropriate level within one year after notification of the new rating.

B. The Executive Secretary must be notified by the facility owner within 10 working days after termination of employment of the Chief Operator considered in DRC, or when he is otherwise unable to perform those duties. The wastewater works must have a certified operator or an operator with a restricted certificate at the appropriate level within one year from the date the vacancy occurred.

C. For newly constructed wastewater works, a certified operator or an operator with a restricted certificate at the appropriate level must be employed within one year after the system is deemed operable.

D. Those required to be certified may operate a system with a restricted certificate of the required grade for up to one year for a Class I or Class II facility, or up to two years for a Class III or Class IV facility, but may not continue to operate a system if they are unable to obtain an unrestricted certificate at the end of the stipulated period.

E. Contracts

1. General. In lieu of employing a DRC operator as part of its workforce, a facility owner may enter into a contract for DRC services with an operator certified at the appropriate level, or with another public or private entity with operators certified at the appropriate level.

2. Any such contract must be reviewed and approved by the Executive Secretary.

3. If the contract is with another entity, it must include the names of the certified individuals who will be in direct responsible charge of the operation of the facility. At a minimum the contract must contain the following elements:

a. A clear description of the overall duties and responsibilities of the facility owner and the responsibilities of the contracted DRC operator(s) related to the supervision of the facility's operation, including the frequency of visits and the duties to be performed.

b. Identification of the contract period and effective date of the contract

c. Consideration

d. Termination clause

e. Execution by authorized signatories

R317-10-6. Facility Classification System.

Treatment plants and collection systems shall be classified in accordance with Table 1.

TABLE 1
FACILITY CLASSIFICATION SYSTEM

FACILITY CATEGORY	CLASS			
	I	II	III	IV
Collection Pop.	3,500	3,501 to	15,001 to	50,001
and (1) Served	and less	15,000	50,000	greater
Treatment Range	30 and	31 to 55	56 to 75	76 and

Plant (2) of Fac. less greater
Points

Small Pop. 3,500 and less
Lagoon Equiv.
Systems(3) Served

(1) Simple "in-line" treatment (such as booster pumping, preventive chlorination, or odor control) is considered an integral part of a collection system.

(2) Treatment plants shall be assigned "facility points" in accordance with Table 2 "Wastewater Treatment Plant Classification System".

(3) A combined certificate shall be issued for treatment works/collection system operation.

TABLE 2
WASTEWATER TREATMENT PLANT CLASSIFICATION SYSTEM

Each Unit process should have points assigned only once.

Item	Points
SIZE (2 PT Minimum - 20 PT Maximum)	
Max. Population equivalent (PE) served, peak day(1)	1 - 10
Design flow average day or peak month average, whichever is larger(2)	1 - 10
VARIATION IN RAW WASTE (3)	
Variations do not exceed those normally or typically expected	0
Recurring deviations or excessive variations of 100 - 200% in strength and/or flow	2
Recurring deviations or excessive variations of more than 200% in strength and/or flow	4
Raw wastes subject to toxic waste discharges	6
Acceptance of septage or truck-hauled waste	2
PRELIMINARY TREATMENT	
Plant pumping of main flow	3
Screening, comminution	3
Grit removal	3
Equalization	1
PRIMARY TREATMENT	
Clarifiers	5
Imhoff tanks or similar	5
SECONDARY TREATMENT	
Fixed film reactor	10
Activated sludge	15
Stabilization ponds w/o aeration	5
Stabilization ponds w/aeration	8

TERTIARY TREATMENT

Polishing ponds for advanced waste treatment	2
Chemical/physical advanced waste treatment w/o secondary	15
Chemical/physical advanced waste treatment following secondary	10
Biological or chemical/biological advanced waste treatment	12
Nitrification by designed extended aeration only	2
Ion exchange for advanced waste treatment	10
Reverse osmosis, electrodialysis and other membrane filtration techniques	15
Advanced waste treatment chemical recovery, carbon regeneration	4
Media Filtration	5

ADDITIONAL TREATMENT PROCESSES

Chemical additions (2 pts./each for max. of 6 pts.)	2 - 6
Dissolved air flotation (for other than sludge thickening)	8
Intermittent sand filter	2
Recirculating intermittent sand filter	3
Microscreens	5
Generation of oxygen	5

SOLIDS HANDLING

Solids conditioning	2
Solids thickening (based on technology)	2 - 5
Mechanical dewatering	8
Anaerobic digestion of solids	10
Utilization of digester gas for heating or cogeneration	5
Aerobic digestion of solids	6
Evaporative sludge drying	2
Solids reduction (including incineration, wet oxidation)	12
On-site landfill for solids	2
Solids composting	10
Land application of biosolids by contractor	2
Land application of biosolids under direction of facility operator in DRC	10

DISINFECTION (10 pt. max.)

Chlorination or ultraviolet irradiation	5
Ozonation	10

EFFLUENT DISCHARGE (10 pt. max.)

Mechanical Post aeration	2
Direct recycle and reuse	6
Land treatment and disposal (surface or subsurface)	4

INSTRUMENTATION (6 pt. max.)

Use of SCADA or similar instrumentation systems	
---	--

to provide data with no process operation	0
Use of SCADA or similar instrumentation systems to provide data with limited process operation	2
Use of SCADA or similar instrumentation systems to provide data with moderate process operation	4
Use of SCADA or similar instrumentation systems to provide data with extensive/total process operation	6

LABORATORY CONTROL (15 pt. max) (4)

Bacteriological/biological (5 pt. max):

Lab work done outside the plant	0
Membrane filter procedures	3
Use of fermentation tubes or any dilution method (or E. coli determination)	5

Chemical/physical (10 pt. max):

Lab work done outside the plant	0
Push-button, visual methods for simple tests (i.e. pH, settleable solids)	3
Additional procedures (ie, DO, COD, BOD, gas analysis, titrations, solids volatile content)	5
More advanced determinations (ie, specific constituents; nutrients, total oils, phenols)	7
Highly sophisticated instrumentation (i.e., atomic absorption, gas chromatography)	10

- (1) 1 point per 10,000 P.E. or part; maximum of 10 points
- (2) 1 point per MGD or part
- (3) Key concept is frequency and/or intensity of deviation or excessive variation from normal or typical fluctuations; such deviation may be in terms of strength, toxicity, shock loads, inflow and infiltration, with point values ranging from 0 - 6.
- (4) Key concept is to credit laboratory analyses done on-site by plant personnel under the direction of the operator in direct responsible charge with point values ranging from 0 - 15.

R317-10-7. Qualifications for Operator Grades.

A. General

1. "Qualification Points" means total of years of education and experience required. All substitutions are year for year equivalents. A college "year" is considered 45 quarter hours or 30 semester hours of credit.

2. College-level education must be in a job-related field to be credited. However, partial credit may be given for non-job related education at the discretion of the Council.

3. Experience may be substituted for a high school education or a graduate equivalence degree in Grades I and II only.

4. Education may be substituted for experience, as specified below.

B. Grade I - 13 points required

1. High school diploma or equivalency (12 points), or highest grade completed (one point per grade, up to 12 points).
2. One year operating experience (one point per year).

3. Experience may be substituted for all or any part of the education requirements, on a one-to-one basis.

4. Education may not be substituted for experience.

C. Grade II - 14 points required

1. High school diploma or equivalency (12 points), or highest grade completed (one point per grade, up to 12 points).

2. Two years operating experience (one point per year)

3. Up to one year of additional education may be substituted for an equivalent amount of operating experience.

4. Experience may be substituted for all or any part of the education requirement, on a one-to-one basis.

D. Grade III - 16 points required

1. High school diploma or equivalency (12 points), or highest grade completed (one point per grade, up to 12 points).

2. Four years operating experience (one point per year)

3. Up to 2 years of additional education may be substituted for an equivalent amount of operating experience. Relevant and specialized operator training may be substituted for education requirement, where 25 CEUs is equivalent to 1 year of education.

E. Grade IV - 18 points required

1. High school diploma or equivalency (12 points), or highest grade completed (one point per grade, up to 12 points)

2. Six years operating experience (one point per year)

3. Up to 2 years of additional education may be substituted for an equivalent amount of operating experience. Relevant and specialized operator training may be substituted for education requirement, where 25 CEUs is equivalent to 1 year of education.

R317-10-8. Council.

A. Members of the Council shall be appointed by the Board from recommendations made by interested organizations including the Department of Environmental Quality, Utah League of Cities and Towns, Water Environment Association of Utah, the Professional Wastewater Operators Division of the Water Environment Association of Utah, the Utah Rural Water Association, Utah Valley State College, and the Civil/Environmental Engineering Departments of Utah's universities. The Council shall serve at the discretion of the Board to oversee the certification program.

B. The Council shall consist of eight members as follows:

1. Three members who are operators holding valid certificates. At least one shall be a wastewater collection system operator.

2. One member with three years management experience in wastewater treatment and collection, who shall represent municipal wastewater management.

3. One member who is a civil or environmental engineering faculty member of a university in Utah.

4. One non-voting member who is a Senior Environmental Engineer in the Division of Water Quality or other duly designated person who shall represent the Board.

5. One member from the private sector.

6. One member representing vocational training.

C. Voting Council members shall serve as follows:

1. Terms of office shall be for three years with two members retiring each year (except for the third year when three shall

retire).

2. Appointments to succeed a Council member who is unable to serve his full term shall be for the remainder of the unexpired term.

3. Council members may be reappointed, but they do not automatically succeed themselves.

D. Each year the Council shall elect from its membership a Chairman and Vice Chairman.

E. The duties of the Council shall include:

1. Preparing and conducting examinations for the various grades of operators, and issuing and distributing the certificates.

2. Regularly reviewing the certification examinations to ensure compatibility between the examinations and operator responsibilities.

3. Ensuring that the certification examinations and training curricula are compatible.

4. Distributing examination applications and notices.

5. Receiving all applications for certification and evaluating the record of applicants as required to establish their qualifications for certification under this rule.

6. Maintaining records of operator qualifications and certification.

7. Preparing an annual report for distribution to the Board and other interested parties.

F. A majority of voting members shall constitute a quorum for the purpose of transacting official Council business.

R317-10-9. Application for Examination.

Prior to taking an examination, an applicant must file an application of intention with the Council, accompanied by evidence of qualifications for certification in accordance with the provisions of this rule on application forms available from the Council.

R317-10-10. Examination.

A. The time and place of examinations to qualify for a certificate shall be determined by the Council. All examinations shall be graded and the applicant notified of the results. Examination fees shall be charged to cover the costs of testing.

B. Normally, all examinations for certification shall be written. However, upon request an oral examination will be given.

Such examination shall be conducted by at least two people, at least one of whom is a Council member. Those persons assisting the Council member must be approved by the Council. All exams shall be administered in a manner that will ensure the integrity of the certification program.

C. In the event an applicant fails an exam, the applicant may request to review the exam within 30 days following receipt of the exam score. The Council shall not review examination questions for the purpose of changing individual examination scores. However, questions may be edited for future examinations.

If an error is found in the grading of the exam, credit may be given.

R317-10-11. Certificates.

A. All certificates shall indicate one of the following grades for which they are issued.

1. Wastewater Treatment Operator - Grades I through IV.
2. Restricted Wastewater Treatment Operator - Grades I through IV.
3. Wastewater Collection Operator - Grades I through IV.
4. Restricted Wastewater Collection Operator - Grades I through IV.
5. Small Lagoon System Operator - Grade I Wastewater Treatment and Collection System Combined.
6. Restricted Small Lagoon System Operator - Grade I Wastewater Treatment and Collection System Combined.

B. An applicant shall have the opportunity to take any grade of examination. A restricted certificate shall be issued if the applicant passes the exam but lacks the experience or education required for a particular grade.

An unrestricted certificate shall be issued if the applicant passes the exam and the experience and education requirements appropriate to the particular grade are met. Restricted certificates shall become unrestricted when the appropriate experience and education requirements are met and a change in status fee is paid. A restricted certificate does not qualify a person as a certified operator at the grade level that the restricted certificate is issued, until the limiting conditions are met, except as provided in R317-10-5. Upon application, a restricted certificate may be renewed subject to the conditions in C below. Replacement certificates may be obtained by payment of a duplicate certificate fee.

C. Certificates shall continue in effect for a period of up to three years unless revoked prior to that time. The certificate must be renewed each three years by payment of a renewal fee and submittal of evidence of required CEUs. The certificates expire on December 31 of the last year of the certificate. Operators considered in DRC must renew by the expiration date in order for the wastewater works to remain in compliance with this rule. Request for renewal shall be made on forms supplied by the Council. It shall be the responsibility of the operator to make application for certificate renewal.

D. An expired certificate may be reinstated within ~~[three months]~~ one year after expiration by payment of a reinstatement fee. After ~~[three months]~~ one year, an expired certificate cannot be reinstated, and the operator must retest to become certified. The required CEUs for renewal must be accrued before expiration of the certificate. When unusual circumstances exist, an operator may petition the Council to request additional time to meet the requirements. Each petition will be considered on its own merits.

E. CEUs must be earned during the 3 year period prior to the expiration date of the certificate.

F. The Council may, after appropriate review, waive examination of applicants holding a valid certificate or license issued in compliance with other certification plans having equivalent standards, and issue a comparable Utah certificate upon payment of a reciprocity fee.

If the applicant is working in another state at the time of

application, or has relocated to Utah but has not yet obtained employment in the wastewater field in Utah, a letter of intent to issue a certificate by reciprocity may be provided. When the applicant provides proof of employment in the wastewater field in Utah, and meets all other requirements, a certificate may be issued.

G. A grandfather certificate shall be issued, upon application and payment of an administrative fee, to qualified operators who must be certified (chief operators, supervisors, or anyone considered in direct responsible charge). The certificate shall be valid only for the wastewater works at which the operator is employed as that facility existed on March 16, 1991. Operators must obtain initial certification on or before March 16, 1994. The certificate may not be transferred to another facility or person. If the facility undergoes an addition of a new process, even if the facility classification does not change, or the collection system has a change in rating, the respective operator must obtain a restricted or unrestricted certificate within one year as specified in this rule.

Grandfather certificates shall be issued for a period of up to three years and must be renewed prior to the expiration date to remain in effect. Renewal shall include the payment of a renewal fee and submittal of evidence of required CEUs. The renewal fee shall be the same as that charged for renewal of other certificates. If the grandfather certificate is not renewed prior to the expiration date, the wastewater works may be considered to be out of compliance with this rule. The operator would then be required to pass the appropriate certification examination to become a certified operator.

The grandfather certificate shall be issued if the currently employed operator:

1. Was a chief operator or person in direct responsible charge of the wastewater works on March 16, 1991; and
2. Had been employed at least ten years in the operation of the wastewater works prior to March 16, 1991; and
3. Demonstrates to the Council his capability to operate the wastewater works at which he is employed by providing employment history and references.

R317-10-12. CEUs and Approved Training.

A. CEUs shall be required for renewal of each certificate according to the following schedule:

TABLE 3
REQUIRED CEUs FOR RENEWAL OF EACH CERTIFICATE

OPERATOR GRADE	CEUs REQUIRED IN A 3-YEAR PERIOD
Grade I	2
Grade II	2
Grade III	3
Grade IV	3

B. All CEUs for certificate renewal shall be subject to review for approval to ensure that the training is applicable to

wastewater works operation and meets CEU criteria. Identification of approved training, appropriate CEU or credit assignment and verification of successful completion is the responsibility of the Council. Training records shall be maintained by the Council.

C. All in-house or in-plant training which is intended to meet any part of the CEU requirements must be approved by the Council. In-house or in-plant training must meet the following general criteria to be approved:

1. Instruction must be under the supervision of an instructor approved by the Council.

2. An outline must be included with all submittals listing subjects to be covered and the time allotted to each subject.

3. A list of the teacher's objectives must be submitted which documents the essential points of the instruction ("need-to-know" information) and the methods used to illustrate these principles.

D. No more than one-half of required CEU credits, over a three-year period prior to the expiration date of a certificate, shall be given for registration and attendance at the annual technical program meetings of the Water Environment Association of Utah, the Water Environment Federation, Rural Water Association of Utah, or similar organizations.

E. Training must be related to the responsibilities of a wastewater works operator. If a person holds multiple wastewater operator certificates (treatment and collection), CEU credit may be received for each certificate from one training experience only if the training is applicable to each certificate. It is recommended that at least one-half of the required CEUs be technical training directly related to the job duties.

R317-10-13. Recommendations of the Council.

A. Initial recommendations. All decisions of the Council shall be in the form of recommendations for action by the Executive Secretary. The Council shall notify an applicant of any initial recommendation. Any such applicant may, within 30 days of the date the Council's notice was mailed, request reconsideration and an informal hearing before the Council by writing to: Wastewater Operator Certification Council, Division of Water Quality, Department of Environmental Quality, State of Utah, Salt Lake City, Utah 84114-4870. The Council shall notify the person of the time and location for the informal hearing.

B. Following the informal hearing, or the expiration of the period for requesting reconsideration, the Council shall notify the Executive Secretary of its final recommendation.

C. A challenge to the Executive Secretary's determination regarding Certification may be made as provided in R317-9-3.

R317-10-14. Certificate Suspension and Revocation Procedures.

A. Grounds for suspending or revoking an operator's certificate may be any of the following:

1. Demonstrated disregard for the public health and safety;
2. Misrepresentation or falsification of figures and/or reports submitted to the State;
3. Cheating on a certification exam;
4. Falsely obtaining or altering a certificate; or

5. Gross negligence, incompetence or misconduct in the performance of duties as an operator.

B. Suspension or revocation may result where it may be shown that circumstances and events relative to the operation of the wastewater works were under the operator's jurisdiction and control. Circumstances beyond the control of an operator shall not be grounds for suspension or revocation action.

C. The Council may make recommendations to the Executive Secretary regarding the suspension or revocation of a certificate.

Prior to making any such recommendation, the Council shall inform the individual in writing of the reasons the Council is considering such a recommendation. The Council shall allow the individual an opportunity for an informal hearing before the Council. Any request for an informal hearing shall be made within 30 days of the date the Council's notification is mailed.

D. Following an informal hearing, or the expiration of the period for requesting a hearing, the Council shall notify the Executive Secretary of its final recommendation.

E. A challenge to the Executive Secretary's determination may be made as provided in R317-9-3.

R317-10-15. Noncompliance.

A. Noncompliance with these Certification rules is a violation of Section 19-5-115 Utah Code Annotated.

B. The Council shall refer cases of noncompliance with this rule to the Executive Secretary.

KEY: water pollution, operator certification, wastewater treatment, renewals

Date of Enactment or Last Substantive Amendment: [~~October 22, 2007~~]2011

Notice of Continuation: October 2, 2007

Authorizing, and Implemented or Interpreted Law: 19-5



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of Environmental Quality

Amanda Smith
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

MEMORANDUM

TO: Utah Water Quality Board

THROUGH: Walter Baker

FROM: John Kennington

DATE: October 18, 2011

SUBJECT: R317-8-9, "Pesticide Discharge Permit" Rule, Request for Rule Adoption, October 26, 2011 Water Quality Board meeting

This action item is a request for provisional approval to adopt the new UPDES "Pesticide Discharge Permit" rule. The rule is on public notice from October 1, 2011 to October 31, 2011. As the public notice period ends two days after the Water Quality Board Meeting, the request is for approval to adopt the rule, pending no significant adverse comment to the rule being received through the end of the public comment period.

Background

The application of pesticides in Utah, even those applied on or near waters of the State, has traditionally been regulated through the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). In Utah that program has been administrated by the Department of Agriculture and Food.

On November 27, 2006, the EPA issued a rule clarifying two specific circumstances, in which a National Pollutant Discharge Elimination System (NPDES) permit would not be required, to apply pesticides in, or around water. The rule became effective on January 26, 2007.

On January 9, 2009, the US Sixth Circuit Court vacated EPA's 2006 NPDES Pesticides Rule. The Court held that the Clean Water Act unambiguously includes "biological pesticides" and "chemical pesticides", with residuals, within its definition of "pollutant". Chemical pesticide residuals are pollutants if they are discharged from a point source, and thus require an NPDES permit issued under the auspices of the Clean Water Act. Biological pesticides are always considered pollutants regardless of whether the application results in residuals and require an NPDES permit for all discharges from a point source.

3.21

The EPA subsequently requested a two-year stay in implementation of the NPDES permitting program, which was granted by the court. NPDES permits were to be required no later than April 9, 2011, for pesticide discharges that may result in overspray to, or which may land on waters of the U.S. In May, 2011 the EPA requested and was granted an additional stay from the Court extending the required NPDES pesticide permitting deadline to October 31, 2011.

The EPA has developed its own Pesticide General Permit (PGP) for the five states which do not have delegated UPDES programs. Utah has also developed its own PGP through its UPDES program for permitting Utah's pesticide operators by that same deadline.

Although the Division already has authority to issue general permits with its existing R317-8 "UPDES" rule, it decided, for best user notification and transparency, to produce an additional section within that rule, which is specific to Pesticide permitting. This new rule section (R317-8-9, "Pesticide Discharge Permit") contains basic information regarding which entities (operators) need a PGP and when they must apply for it. It is anticipated that the accompanying PGP will cover almost all pesticide operators, but the new rule section also specifies contingencies for issuing an individual permit to cover unusual site specific conditions, if such is necessary.

The Division is posting the rule for public comment between October 1 and October 31, 2011, as the rule should be effective by October 31, 2011 to meet the Court mandate for NPDES permit coverage.

The proposed rule language is attached for your review. The new language will be added to R317-8, the UPDES rule, principally as Section R317-8-9. There is one additional page from R317-8-2.1 with new rule language, as well. Only the pages of R317-8 affected by the changes for the new rule are attached, with the new language text shown in Underline and ~~Strikethrough~~ for clarity.

If you have any questions regarding the rule please contact John Kennington (801-536-4380, jkennington@utah.gov) or Mark Schmitz (801-536-4384, mschmitz@utah.gov) of the DWQ staff.

R317-8, New Pesticide Rule Language Inserts into R317-8

(New rule changes are shown with Underlines and ~~Strikethroughs~~ in only the sections of R317-8 that are to be changed.)

R317-8-2. Scope and Applicability.

2.1 APPLICABILITY OF THE UPDES REQUIREMENTS. The UPDES program requires permits for the discharge of pollutants from any point source into waters of the State. The program also applies to owners or operators of any treatment works treating domestic sewage, whether or not the treatment works is otherwise required to obtain a UPDES permit in accordance with R317-8-8. Prior to promulgation of State rules for sewage sludge use and disposal, the Executive Secretary shall impose interim conditions in permits issued for publicly owned treatment works or take such other measures as the Executive Secretary deems appropriate to protect public health and the environment from any adverse affects which may occur from toxic pollutants in sewage sludge.

(1) Specific inclusions. The following are examples of specific categories of point sources requiring UPDES permits for discharges. These terms are further defined in R317-8-3.5 through R317-8-~~[8.10]~~9.2

- (a) Concentrated animal feeding operations;
- (b) Concentrated aquatic animal production facilities;
- (c) Discharges into aquaculture projects;
- (d) Storm water discharges;
- (e) Silvicultural point sources; and
- (f) Pesticide discharges.

*(...existing, intervening R317-8 rule language not shown....
New Pesticide Rule Section R317-8-9 will be added to the end
of the existing R317-8 rule as shown below.)*

R317-8-9. Pesticide Discharge Permit.

9.1 APPLICABILITY.

(1) This section applies to qualified groups of operators who discharge on or near surface waters of the State from the application of (1) biological pesticides or (2) chemical pesticides (hereinafter collectively "pesticides"), when the pesticide application is for one of the following pesticide use patterns:

- (a) Mosquito and Other Insect Pests - to control public health/nuisance and other insect pests that may be

present on or near standing or flowing surface water. Public health/nuisance and other insect pests in this use category include but are not limited to mosquitoes and black flies.

(b) Weed and Algae Control - to control invasive or other nuisance weeds and algae in water and at water's edge, including irrigation ditches and/or irrigation canals.

(c) Aquatic Nuisance Animal Control - to control invasive or other nuisance animals in water and at water's edge. Aquatic nuisance animals in this use category include, but are not limited to fish, lampreys, and mollusks.

(d) Forest Canopy Pest Control - application of a pesticide to a forest canopy to control the population of a pest species (e.g., insect or pathogen) where to target the pests effectively a portion of the pesticide unavoidably will be applied over and deposited to water.

(2) Qualified Operator Groups. Certain types of entities (operators), engaged in the above pesticide use patterns, will be required to submit a NOI and obtain coverage under a Pesticide General Permit (PGP) as detailed below:

Operator Group 1 - All Operators involved with any discharges to Category 1 (R317-2-12) waters of the State. All operators involved in the discharge of pesticides on or near surface waters of State, which have been determined by the Water Quality Board to be Category 1 waters of the State must submit a NOI to obtain coverage under the PGP. The NOI must detail each area and watershed where a discharge is to occur. Only pesticide applications which are made to restore or maintain water quality or to protect public health or the environment would be covered under the PGP for discharges on or near Category 1 surface waters of the State.

Operator Group 2 - All Government or Quasi-Governmental Agencies or Special Service Districts. All government agency operators (federal, state, county or local agencies and special service districts) involved in the discharge of pesticides under the conditions described above, as a primary purpose or as a significant activity in their operations, must submit a NOI describing each area and watershed where a discharge is to occur to obtain PGP coverage regardless of the size of the area to be treated.

Operator Group 3 - Other Operators. Other operators engaged in the discharge of pesticides for the conditions described above as a primary purpose or as a significant

activity in their operations, like private pest control companies, water supply or canal companies or other large operators whose discharges exceed the treatment area thresholds detailed in Table 2 below must apply for a NOI to obtain coverage under the PGP as detailed in Table 1 below.

Operator Group 4 - Operators involved in a "Declared Pest Emergency Situation". All operators that otherwise aren't required to obtain a NOI, but become involved in a "declared pest emergency situation", as defined below, and will exceed any of the treatment area thresholds in Table 2 must submit a NOI to obtain PGP coverage as detailed in Table 1 below.

9.2 DEFINITIONS. The following definitions specifically pertain to aspects of pesticide discharge permitting in the UPDES program and should be used in conjunction with the definitions shown in R317-1-1 and R317-8-1.5.

(1) "Biological Pesticides" (also called biopesticides) means microbial pesticides, biochemical pesticides and plant-incorporated protectants (PIP). Microbial pesticide means a microbial agent intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or dessicant, that (a) is a eucaryotic microorganism including, but not limited to, protozoa, algae, and fungi; (b) is a procaryotic microorganism, including, but not limited to, Eubacteria and Archaeobacteria; or (c) is a parasitically replicating microscopic element, including but not limited to, viruses (40 CFR 158.2100(b)).

(2) "Biochemical pesticide" means a pesticide that (a) is a naturally-occurring substance or structurally-similar and functionally identical to a naturally-occurring substance; (b) has a history of exposure to humans and the environment demonstrating minimal toxicity, or in the case of a synthetically-derived biochemical pesticide, is equivalent to a naturally-occurring substance that has such a history; and (c) Has a non-toxic mode of action to the target pest(s) (40 CFR 158.2000(a)(1)). Plant-incorporated protectant means a pesticidal substance that is intended to be produced and used in a living plant, or in the production thereof, and the genetic material necessary for production of such a pesticidal substance. It also includes any inert ingredient contained in the plant, or production thereof (40 CFR 174.3).

(3) "Chemical Pesticides" means all pesticides not otherwise classified as biological pesticides.

(4) "Declared Pest Emergency Situation" means an event defined by a public declaration by a federal agency, state, or local government of a pest problem determined to require control through application of a pesticide beginning less than ten days after identification of the need for pest control. This public declaration may be based on a; significant risk to human health; significant economic loss; or significant risk to Endangered species, Threatened species, Beneficial organisms, or, the environment.

(5) "NOI" means "Notice of Intent", the formal document submitted by an operator to the Division of Water Quality (DWQ) to request coverage under the Pesticide General Permit.

(6) "Operator" means any entity involved in the application of a pesticide which may result in a discharge to waters of the State that meets either or both of the following two criteria:

(a) The entity has control over the financing for, or the decision to perform pesticide applications that result in discharges, including the ability to modify those decisions or;

(b) The entity has day-to-day control of, or performs activities that are necessary to ensure compliance with the permit (e.g., they are authorized to direct workers to carry out activities required by the permit or perform such activities themselves).

(7) "surface waters of the State" means waterbodies, waterways, streams, lakes or rivers that contain standing or flowing water at the time of pesticide application.

(8) "Treatment Area" means the entire area, whether over land or water, where the pesticide application is intended to provide pesticidal benefits or may have an environmental impact. In some instances, the treatment area will be larger than the area where pesticides are actually applied.

2.3 ADMINISTRATIVE REQUIREMENTS.

(1) All operators who are included in the use patterns specified in R317-8-9.1, and discharge to active surface waters of the State as a result of the application of a pesticide must be covered by a UPDES permit, beginning October 31, 2011, by submitting a NOI to obtain coverage under the Pesticide General Permit (PGP). In the event that a discharge occurs prior to submitting a NOI, you must comply with all other requirements of the PGP immediately. All operators will automatically be covered under the PGP for the first five-year permit term of October 31, 2011 to

October 30, 2016 if they submit a NOI by February 15, 2012. To obtain PGP coverage for the second and all succeeding PGP five-year terms, all operators must submit a NOI prior to the expiration date (October 30) of the PGP every five years. Each NOI submission will secure permit coverage for the full five-year term of the PGP.

(2) New, qualified operators, who require PGP coverage after February 15, 2012 must submit a NOI in accordance with Table 1 below. The NOI will secure PGP coverage for the remainder of the five-year term of the PGP in effect at that time. For continued PGP coverage during the next five-year permit cycle, a new NOI must be submitted before the expiration of the present PGP, as detailed above.

Table 1. Discharge Authorization Date (a/)

<u>Category</u>	<u>NOI Submittal</u>	<u>Discharge</u>
<u>Authorization</u>	<u>Deadline</u>	<u>Date</u>
Operators who know	At least 10 days	No earlier than 10
or should have rea-	prior to	after the complete
and		
sonably known, prior commencement of		accurate NOI is
to commencement of discharge		mailed and
discharge, that they		postmarked.
will exceed an annual		
treatment area thresh-		
old identified in		
R317-8-9.3 (4).		
Operators who do not	At least 10 days	Original
authorization		
know or would have	prior to exceed-	terminates when
annual		
reasonably not known	ing an annual	treatment area
thresh-		
until after commen-	treatment area	hold is exceeded. Op-
ment of discharge,	threshold.	erator is reauthor-
that they will ex-		ized no earlier th-
ceed an annual tr-		an 10 days after
eatment area thr-		complete and accurate
eshold identified		NOI is mailed
in R317-8-9.3(4).		and postmarked.
Operators commenc-	No later than 30	Immediately, for

b/ Calculations should include the linear extent of the application made at water's edge adjacent to active surface waters of the State and at the time of pesticide application. For calculating annual treatment totals, count each pesticide application activity and each side of a linear water body as a separate activity or area. For example, treating both sides of a ten mile ditch is equal to twenty miles of water treatment area.

(5) All applicators or operators, whether or not falling into the use categories, or required to obtain PGP coverage, or whether or not meeting the minimum annual treatment area thresholds shown in R317-8-9.3(4) must conform to the Technology Based Effluent limitations in the PGP and to all applicable rules and regulations of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). The permittee is expected to familiarize himself with the PGP and conform to its requirements, if he discharges any pesticides prior to obtaining a NOI. After February 15, 2012 the permittee is authorized to discharge under the terms and conditions of the PGP only with submission of a completed electronic NOI in accordance with Table 1 above.

(6) Based on a review of the NOI or other information, the DWQ may delay authorization to discharge under the PGP or may determine that additional technology-based and/or water quality-based effluent limitations are necessary; or may deny coverage under this PGP and require submission of an application for an individual UPDES permit in accordance with this rule. If the Executive Secretary determines an individual UPDES permit is required, that permitting process will proceed independently.

KEY: water pollution, discharge permits

Date of Enactment or Last Substantive Amendment: April 7, 2009

Notice of Continuation: October 4, 2007

Ducks dying in pond at Liberty Park

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Updated: 2:04 am | **Published:** 8/29 10:53 pm
Reported by: Brian Carlson



SALT LAKE CITY (ABC 4 News) - Dozens of dead ducks are being pulled out from the pond at Liberty Park. Monday ABC 4 is investigating why are they dying? And are your pets and your children at risk?

Dead ducks floating in the water aren't exactly what kids go to see when they visit the pond at Liberty Park. But employees said lately it's been hard to miss.

"So many people have been coming up saying there's dead ducks lying around the pond," said Jacob Roundy, Liberty Park employee.

Over the weekend employees pulled out roughly 30 dead ducks and it's drawing concern from parents who's children and pets come to play in the park.

"That would be good to know if there's something in the water we should be keeping our animals away from," said Sky Staley, park-goer.

So Monday ABC 4 showed the problem to an expert from the Utah Division of Wildlife Resources. He said odds are something is in the water.

"It appears it may be Avian Type-C Botulism," said Justin Dolling, Program Coordinator, Utah Div. of Wildlife Resources.

Dolling said when ponds like Liberty Park get hot in late in the summer; it's common for sediments below the surface to release the Botulism toxin. Insects absorb it, birds eat the bugs, and ducks start to die.

"If a duck or bird is susceptible to that type of invertebrate they get a high dose of the toxin," said Dolling.

Monday Dolling and ABC 4's Brian Carlson found a duck showing early signs of the disease.

"It's having a difficult time holding his head up, it's neck up," said Dolling.

So if ducks can get it, what about people or pets? Health experts at the Salt Lake Valley Health Department said we shouldn't be concerned.

"Avian Botulism doesn't really affect people. We're pretty resistant. Dogs, cats are pretty resistant to the toxin," said Diane Keay, Environmental Health Area Supervisor, Salt Lake Valley Health Dept.

Experts said the only way dogs or kids can get Botulism from the pond is to have a lot of contact with an animal that's already infected. So odds are you're not going to get sick if you come to park. But just to be safe, if you have a dog don't let them put dead birds in their mouth, if you have kids don't let them pick 'em up.

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4.1

The Salt Lake Tribune

High mercury in fish prompts three new Utah warnings

By JUDY FAHYS

The Salt Lake Tribune

Published: August 24, 2011 12:07AM

Updated: August 23, 2011 11:49PM

State health and environmental officials added three new locations Tuesday to the list of Utah fishing spots where fish contain too much mercury.

People are urged to limit their consumption of black bullhead at Recapture Reservoir in San Juan County and how much brown trout they eat from the Duchesne River near Tabiona in Duchesne County and the Bough Reservoir in Uintah County.

The new fish consumption guidelines bring to 19 the number of places where mercury contamination is considered high enough that anglers and the people who share their catch should limit the amount of fish they eat or avoid eating it altogether.

In addition, fish species were added to standing consumption advisories for Newcastle, Red Fleet and Steinaker reservoirs. The Utah Health Department released the new advisories in conjunction with the Wildlife Resources and Water Quality divisions.

"We recognize there is a need to continue to get the word out," said John Whitehead, assistant director of water quality.

During the past decade, state agencies have tested more than 2,500 fish from 322 waterways — 200 river and stream sites, plus 122 lake and reservoir sites. They have found average mercury concentrations that exceeded the federal Environmental Protection Agency limit at 19 locations.

Drifting in air currents from power plants, gold processing and other sources that can be as far away as China, particles of the metal mercury settle on the land and in water, where it sometimes transforms into dangerous methylmercury.

Then methylmercury moves up the food chain into the flesh of fish and waterfowl. Humans who eat contaminated meat also can build up high levels, so the advisories are aimed at giving guidelines on how much fish is safe to eat.

Women of childbearing age and children are at greatest risk because methylmercury damages developing brains and nervous systems — sometimes even before children are born.

The Great Salt Lake has the nation's only consumption advisory for waterfowl because of high mercury levels, although consumption advisories for fish have been found throughout the United States.

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Brian Moench, founder of Utah Physicians for a Healthy Environment, called the need for new advisories "deplorable and tragic." He noted that mercury, though it causes significant damage to people, is not adequately regulated.

"The cost to society is enormous," he said. "We need to clamp down on it, and we need to do it now."

Paul Dremann, chairman of the Utah Anglers Coalition, said the latest advisories point to the need to study the extent of mercury pollution in the state, as well as the sources of that pollution. So far, the state has tackled both problems with lots of creativity but scant funding.

"If we want to promote our fisheries, it puts a damper on things to have mercury contamination," said Dremann. "You don't want mercury contaminating those blue-ribbon waters."

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Mercury contamination

At 19 fishing spots in Utah, authorities have advised against eating too much of certain kinds of fish because of mercury contamination. They added new advisories and fish species on Tuesday. Utah's mercury alerts:

Brough Reservoir in Uintah County, brown and rainbow trout*

Calf Creek in Garfield County, brown trout

Desolation Canyon in Carbon County, catfish

Duchesne River near Tabiona in Duchesne County, brown trout*

East Fork Sevier River between Otter Creek and Piute Reservoir in Piute County, brown trout

Gunlock Reservoir in Washington County, largemouth bass

Joe's Valley Reservoir in Emery County, splake trout

Jordanelle Reservoir in Wasatch County, brown trout and smallmouth bass

Mill Creek in Grand County, brown trout

Newcastle Reservoir in Iron County, rainbow trout, smallmouth bass and wipers*

Pine Creek in Garfield County, brown trout

Porcupine Reservoir in Cache County, brown trout

Recapture Reservoir in San Juan County, black bullhead*

Red Fleet Reservoir in Uintah County, largemouth and walleye*

Rock Creek below Upper Stillwater Reservoir in Duchesne County, brown trout

Sand Hollow Reservoir in Washington County, largemouth bass

Steinaker Reservoir in Uintah County, bluegill and largemouth bass*

Upper Enterprise Reservoir in Washington County, rainbow trout

Weber River in Morgan County, brown trout

*Changed or new advisory.

For details about the latest advisories, see the www.fishadvisories.utah.gov.

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4.4

The Salt Lake Tribune

Jordan water district eyes \$50M in bonding

By brandon loomis

The Salt Lake Tribune

Published: October 12, 2011 05:37PM

Updated: October 12, 2011 05:37PM

West Jordan • Jordan Valley Water Conservancy District proposes \$50 million in bonding for capital projects, including construction of a groundwater treatment plant that would likely be the biggest ticket on the list.

The district's board held a hearing on the afternoon of Oct. 12 to consider new bonds to be repaid by ratepayers, though no one commented. The money would help complete the Southwest Groundwater Treatment Plant at the district's West Jordan headquarters. That plant would treat water contaminated by Kennecott Utah Copper operations.

The plant would add about 3,500 acre-feet of water to the district's annual sources by treating a contaminated plume under South Jordan and Riverton to drinking water standards. Kennecott already has built a plant to treat a separate pollution plume near Copperton, producing the same amount of water.

If approved at the board's November meeting, the 30-year bond issue would be the fifth in the past 10 years. Current rates are 3 percent to 5 percent. Previous issues totaled \$144 million, and the district expects to borrow another \$160 million over the next decade.

"We're trying to increase water supplies," Chief Financial Officer Dave Martin said. "Capital projects are going to be around this district for probably a couple of decades."

Construction is continuing and the reverse-osmosis plant was partially paid through previous bonds, Assistant General Manager Alan Packard said. There's another \$15 million to pay on it before completion next year.

The water is contaminated with sulfate and dissolved minerals from mining activity, and Kennecott agreed in a settlement to put \$36 million into treatment. The district agreed to pay part of the costs — what it would normally pay to develop the resource if it weren't polluted — plus extra treatment measures it desires to clean the water beyond federal standards, Packard said.

Other projects likely to be funded through the bonds include pipe and chemical treatment maintenance and a seismic-safety upgrade at district headquarters. The district does not bond with a set list of projects and costs, Martin said, but rather determines the most pressing priorities after bonding.

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Deseret News

Mini yellow submarine testing Utah water in mercury cleanup experiment

Published: Friday, Aug. 12, 2011 5:48 p.m. MDT

CEDAR CITY — A yellow submarine has been spotted in Utah waters.

And while it may look like a torpedo, it's actually part of an experiment aimed at getting toxic mercury out of the water.

Under the waters of Newcastle Reservoir and on the surface, the mini submarine is doing the work of scientists.

"That's why we brought a couple of lounge chairs," said Dave Naftz with the U.S. Geological Survey. "It's out here doing work, and we're sitting under the shade sipping some iced tea."

The autonomous undersea vehicle can slip silently past a fishing boat, although it does look something like a torpedo zeroing in on a target.

"I don't know what it is," boater Jed Andreason said of the sub. "We just tried to stay out of the way."

The yellow submarine will not be pulling any waterskiers. It tops out at 4 knots — a little more than 4 mph.

Up close, it's a bit of a disappointment — measuring only a few feet long. But it's packed with instruments and an onboard computer that communicates by Wi-Fi.

The submarine is capable of diving 200 feet and collects data at a rate of about one sample per second, said Ryan Jackson, a hydrologist with the U.S. Geological Survey.

"For a reservoir like this, we get just a huge, immense data set," Jackson said. "You know when you are running several days in the reservoir with it, compared to typical water-quality samples, which are a few samples a couple of times a year."

The sub collects a lot of information on water quality, including temperature, specific conductance, salinity, depth, pH and turbidity, he said. Its purpose is to survey the lake, top to bottom, to see if the water is getting mixed properly.

Three weeks ago, scientists installed a big floating pump to suck water from the lake bottom to the top. In theory, toxic mercury contamination should go down if oxygen is taken to the bottom and mercury is sucked up into the sunlight.

"The fish caught in this reservoir, there's a do-not-eat consumption warning on these fish," Naftz said. "So we're hoping to improve this and make this fishery good again."

The submarine is being used for only a few days to see if the pumps are doing any good. If it works, many contaminated reservoirs in Utah may get pumps, officials said.

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Deseret News

Students get hands-on look at environmental impacts on water

Published: Thursday, Oct. 13, 2011 4:29 p.m. MDT

Join 80 Students in World Water Monitoring Day Utah Division of Water Quality, Salt Lake City Department of Public Utilities, and CH2M HILL promote environmental stewardship and education through monitoring event at Sugarhouse Park Who: Professional engineers and scientists from Utah Division of Water Quality, Salt Lake City Department of Public Utilities, and CH2M HILL will host almost 80 4th grade students from the Edison Elementary School for a World Water Monitoring Day event. What: Participants will learn firsthand about water quality by testing Parley's Creek for four basic parameters of water quality: pH, turbidity, temperature and dissolved oxygen and entering their results into a global database. Students will be participating in other hands-on events such as using macroinvertebrates to evaluate water quality, learning what they can do to stop pollution, and understanding that most people in the world do not have ready access to water. When: Thursday, October 13, 2011 from 9:00 a.m. to 11:00 a.m. Where: Parley's Creek Pavilion, Sugarhouse Park, Salt Lake City, Utah

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Deseret News

Students get hands-on look at environmental impacts on water

Published: Thursday, Oct. 13, 2011 11:19 p.m. MDT

Edison Elementary School fourth-grader Rueben Herrera hefts two gallons of water during World Water Monitoring Day at Sugar House Park in Salt Lake City on Thursday. The demonstration taught the students how difficult carrying water is for people who do not have ready access to water. Right, Edison Elementary School fourth-graders run water tests.

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4.8

Deseret News

Water quality survey to tap values placed on clean recreational water

Published: Sunday, Aug. 28, 2011 10:00 p.m. MDT

SALT LAKE CITY — That green, floating gunk sometimes hugging the shoreline of Utah's waterways is more than just displeasing to the eye — it's an indicator of water impaired by an over-abundance of nutrients such as phosphorus and nitrogen.

Algae blooms and the presence of cyanobacteria — a photosynthetic bacteria sometimes called blue-green algae — are among the symptoms of a worldwide water quality issue identified as one of the most costly, but urgent environmental problems that needs to be addressed.

According to the EPA:

- 50 percent of U.S. streams have medium to high levels of phosphorus and nitrogen
- 78 percent of surveyed coastal waters have evidence of plant overgrowth, indicative of a nutrient problem
- Nitrate drinking water violations have doubled in eight years. Nitrate is a common groundwater pollutant arising from fertilizer, septic systems or manure storage.

Utah is joining other states across the country in the development of a numeric nutrient criteria for its streams and lakes as part of an EPA requirement to address the problem, which is caused by habitat modification, agriculture and discharge by wastewater treatment plants.

State water quality monitors want to know to what extent the appearance of a lake or stream impacts a user's likelihood to boat, fish, splash or wade, and also if that appearance is important enough to loosen up a user's pocketbook to fix it.

"We want to know how it affects people's decisions — including what are the nutrient-related pollution costs to Utah citizens and what people are willing to pay to fix them," said Jeffrey Ostermiller, the state's chief of water quality management.

To that end, the state Division of Water Quality is surveying 6,000 Utah households and targeted water-recreation groups to tap the importance residents place on good water quality for recreational use, enjoyment and quality of life for future generations.

The survey is being coordinated by the University of Wyoming with results analyzed and summarized by a team at Utah State University.

Ostermiller said the development of the survey has been a partnership that has unveiled surprises along the way.

"It's been very insightful. It links the science with the economics. We speak two different languages; measure things in different units."

The results, however, should help the state chart a clear path in its development of numeric nutrient criteria and a plan of attack to reduce the pollution that threatens prime fishing spots and boating destinations.

Ostermiller and others acknowledge it's not going to be a simple or inexpensive problem to fix and it's likely to not go unnoticed on household water bills.

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The surveys are a follow-up to a 2010 report by the Division of Water Quality that found after extensive research, analysis and input from 30 publicly operated wastewater treatment plants, it could cost as much as \$1 billion in upgrades or outright replacements of systems to meet new, stringent standards.

Those standards would greatly curb the discharge of nutrients like phosphorus and nitrogen, which cause the excessive growth of oxygen-robbing algae and lead to dead zones in waterways.

Entire areas like that have cropped up in the Gulf of Mexico, the Great Lakes, Chesapeake Bay and in coastal Florida.

Because nutrient pollution is a downstream problem in nature — pollutants build as streams and rivers flow to their final outlet — the EPA reasoned that to tackle the problem on a national level has to be state-by-state coordinated front.

The mandate in the regulatory arena comes even as a legal donnybrook continues to unfold in Florida, where environmentalists sued the federal government to force a standard to be put in place for that state.

As a result of the standard, Florida state, local governments, industry and wastewater treatment plants filed multiple legal challenges, saying the standard is unrealistic and too costly to meet.

Ostermiller says Utah is already working with numerous groups such as the agricultural industry and others to address nutrient overload. And while wastewater treatment plants have systems in place to remove nutrients, upgrades or new systems would remove more of them.

"The writing's kind of on the wall," Ostermiller said. "All states are in various stages of developing nutrient criteria. In our region, the surrounding states, Colorado is proposing criteria. They are at the tail end of where we hope to be a year from now."

Ostermiller says Utah's goal is to craft a nutrient criteria plan that is workable and avoids the pitfalls of Florida.

"We have tried to draft an approach that avoids as many of those problems that we can."

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4.10

Ducks dying in pond at Liberty Park

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Updated: 2:04 am | **Published:** 8/29 10:53 pm

Reported by: Brian Carlson



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So if ducks can get it, what about people or pets? Health experts at the Salt Lake Valley Health Department said we shouldn't be concerned.

"Avian Botulism doesn't really affect people. We're pretty resistant. Dogs, cats are pretty resistant to the toxin," said Diane Keay, Environmental Health Area Supervisor, Salt Lake Valley Health Dept.

Experts said the only way dogs or kids can get Botulism from the pond is to have a lot of contact with an animal that's already infected. So odds are you're not going to get sick if you come to park. But just to be safe, if you have a dog don't let them put dead birds in their mouth, if you have kids don't let them pick 'em up.

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County OKs new wastewater systems

by Charli Engelhorn

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The Southeastern Utah District Health Department received approval from the Grand County Council Tuesday, Oct. 4, to use alternative wastewater systems in the four-county area where conventional septic systems are not allowed. Braden Bradford, environmental health director for the health district, explained the differences between conventional methods and the new alternatives, and the issues surrounding the need for different systems.

Bradford said conventional septic systems evenly filter water into the void spaces in gravel, which serve as storage for the wastewater. The water then seeps into the underlying soil, and bacteria in the soil serves to treat the wastewater and put it back into the water cycle. However, Bradford said, some areas are not suitable for that system.

“Either because the towns were built too close together, houses built in the desert or mountains, a lack of soil, or the property is too close to other water sources, many areas are not able to be developed because there is no option for wastewater management,” Bradford said.

The alternative systems suggested by the health district help those issues by adding an extra component that does an extra amount of treating. A certain grain of sand that treats wastewater extremely well or a mechanical treatment filter system are two examples of these alternatives, said Bradford.

“We can mechanically treat the water so we don’t need the 100 to 200 feet of space between wastewater fields and water sources, or the 48 inches of soil,” said Bradford. “With these systems, we could get away with only 24 inches of soil. There are many properties around that could have used such systems in the past.”

State guidelines require that counties be made aware of the types of wastewater systems being installed within county boundaries and to encourage county cooperation should any legal action arise because of noncompliance by homeowners using the alternative systems.

“Because of the mechanisms of treating wastewater, one of the steps for homeowners is submitting to regular inspections to ensure proper treatment,” Bradford said. “We need the county to be behind us if homeowners fail to submit to these inspections or do not follow treatment procedures.”

Bradford said the alternative systems offer several advantages, including that they can be built on areas previously off limits and offer higher levels of wastewater treatment than conventional septic systems. On the downside, he said, the increased efficiency of the systems could open up areas for development that the community may not support. Another disadvantage is the high expense of installation and upkeep.

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Council member Audrey Graham expressed concern that the systems will enable more construction in remote areas.

"I'm concerned with ridgeline development... and if this is opening us up for that and the ability to build stuff where currently it's allowed but not happening because of pragmatics, then that's a concern for me," Graham said.

Bradford said the county could deal with that issue through zoning, and Grand County Community Development Director Krissie Killoy said the county has a ridgeline development ordinance in place and the planning department is on board with the alternative systems.

The health district hopes to have approval from all Utah counties and resolutions in place by the end of the year, Bradford said.

"These methods have been used for years and years with great success," said Bradford. "Utah is kind of backward when it comes to wastewater, so this is like modernization."

Council members approved the resolution by a vote of 5-1. Graham voted against the motion and council member Jim Nyland was not in attendance.

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